APPENDIX A

PROGRAMMED LEARNING MATERIAL

LEARNING

Programmed Learning Material

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Some notes for the students:

1. In this programme you will be introduced with some aspects of learning — concepts of learning, some theories of learning, and the laws of learning.

2. Although this programme may look like a test, it is not a test but just a material developed for the purpose of self-learning.

3. The programme is divided into small sections called 'frames'. Each frame is numbered and separated from the other adjoining frame by space as shown in the following examples:

(Frame) 0. All kinds of insects have six legs. An ant is an insect, therefore, an ant has ____ legs.

(Ans.) Six

(Frame) 00. A spider has eight legs, therefore, a spider ____ (is/is not)

(Ans.) is not

4. Almost every frame teaches something and asks a question which is answered at the bottom of each frame. The format is shown below:

(Frame)
Commentary and question

Answer to the question
5. Read carefully and think out the answers to questions and problems. Then write down your answer on a separate sheet of paper BEFORE looking at the provided answer.

6. In order to prevent your looking ahead to the provided answer, you are to cover the provided answer and the next frame with a piece of a card, which will be given to you.

7. While answering, sometimes you have to choose a certain word or words given in the previous or present frame or from the given panel, sometimes you have to select from the given alternatives, sometimes you have to match the words or phrases in the list, and sometimes you have to compose your answer in your own words or phrases that you feel belong to the blank space or question.

8. After you have written down the answer of one frame, move down the card so as to see the provided answer and check whether your answer is correct. If it is incorrect, mark 'X'. Then proceed to the next frame.

9. While checking your answer, you have to judge for yourself whether your answer is correct. Since you are hardly expected to give exactly the same form of word or words as those provided in the programme.

10. Where there are more than one blanks in one frame, these are numbered.
UNIT - I

CONCEPTS OF LEARNING

Programmed learning material

1. It is necessary for all human beings to ADJUST THEMSELVES to the ENVIRONMENT. Therefore all human beings have to learn to adjust themselves to the environment.

2. All human beings have to LEARN to (1) themselves to the (2).

   (1) adjust          (2) environment

3. An infant is quite helpless at birth but slowly it (1) as to a (2) himself to the environment around him.

   (1) learn            (2) adjust

4. After a child is born, it comes in contact with the environment. It starts reacting and in the process of interaction of an INDIVIDUAL and the ENVIRONMENT, foundation of learning is laid down.

   The foundation of learning is laid down because of the interaction between an (1) and his (2).

   (1) individual     (2) environment
5. Learning can take place only when there is an INTERACTION between an individual and his environment. Therefore, it can be said that learning takes place because of (1) __________ between an (2) __________ and his (3) __________

(a) interaction (2) individual (3) environment

6. So far as learning is concerned, if somebody asks you what learning is, you might find it not easy to define the term. However, I realize that you understand this word and have some concepts about it. So, would you please write it down in your answer sheet so as to compare it with one which is to be discussed in the programme?

You may answer in any way according to your opinion (Your opinion is required).

7. In the situation given in the panel, it can be said that LEARNING has taken place in the child. Learning is said to have taken place because there _____ (is/is not) a change in behaviour of the child.

is
8. The term 'behaviour' is referred to 'action' acted by an organism. There are two types of behaviour of action - OVERT and COVERT behaviour.

Physical action which can be observed is considered to be (1) Behaviour and internal physiological and emotional process which is internal is considered to be (2) Behaviour.

(1) Overt (2) Covert

9. Overt behaviour is not INTERNAL while covert behaviour is __________.

internal

10. There are (1) types of behaviour. The first type is (2) behaviour can be observed. The second one is (3) behaviour which cannot be observed because it is (4) (external/ internal).

(1) two (2) overt (3) covert (4) internal

11. Overt behaviour (1) can be observed but (2) (3) cannot be observed directly, but (4) (can/cannot) be measured in an objective way.

(1) behaviour (2) covert (3) behaviour (4) can
12. Overt behaviour (1) (can/cannot) be observed while covert behaviour (2) (can/cannot) be observed directly but can be (3) in an objective way.

(1) can (2) cannot (3) measured.

13. When there is a change in behaviour of an individual, learning is said to have taken place. Learning is said to have taken place if there is a ________ in behaviour.

14. Learning is said to have taken place when there is a change in ________ of an individual.

15. When there is a change in behaviour of an individual ________ is said to have taken place.

16. The child won't touch or hold the hot kettle or the like with his bare hand any more because of his past experience, i.e., hot kettle (1) (burnt/did not burn) his hand or even if he saw it burn somebody's hand that we can call, it is his ex. (2) e

(1) burnt (2) experience
17. In the above frames, the child's behaviour is changed ___________ (due/not due) to his prior experience.

   due

18. Learning always takes place after PRIOR EXPERIENCE ______.
   true or false?
   Ans. _________ (true/false)

   true

19. The process of changing behaviour because of prior experience mentioned above is called LEARNING. So learning can be defined as 'a c______ in b_______ which is a function of prior e_______.

   (1) change   (2) behaviour   (3) experience

20. Learning is shown by a c______ (1) in b______ (2) as a result of prior e______ (3).

   (1) change   (2) behaviour   (3) experience

21. A boy attempts to operate the tape-recorder for the FIRST time. Therefore his activities become more random.

   On the subsequent attempts to operate the tape-recorder, the boy's activities become _________ (less/more) random.

   less
22. Finally, the boy could operate the tape-recorder as soon as he wanted to. This is because the boy eliminated the incorrect activities which could not make him achieve the goal.

Now whenever the boy has to operate the tape-recorder he will do only the correct or relevant activity. Would you say that learning has taken place in the boy? Why (not)?

Ans. (1) yes (2) has

23. In the above frame, it can be said that the boy has learnt to operate the tape-recorder because his behaviour has changed (temporarily/permanently).

24. In the example given, the boy wants to listen to music of the tape-recorder. It, therefore, can be said that his GOAL is to (1) listen to music of the tape-recorder. Here learning of listening to the music is his (2) goal.
25. In the above frames, learning has become more or less permanent modification of an individual's activity in a given situation due to prior experience in attempt to achieve some (1) goal.

26. Learning is a relative change in (1) which is a function of prior experience (2). Learning takes place only when the learner has some (3) to achieve.

   (1) behaviour  (2) experience  (3) goal

27. When an individual goes to new places or new environment he has to learn many new things and adjusts himself to new situations and he overcomes many obstacles. This is also called learning.

28. From the above frames, the boy will be able to apply his prior experience and succeed in operating those similar electric items. Therefore, it can be seen that learning is modification of behaviour (1) through experience (2).

   (1) behaviour  (2) experience
29. When an individual comes to know what he hasn't known before, or when he learns new habits from experience or training, or when his attitude is changed due to experience, 'LEARNING' is said to have taken place.

So the acquisition of all habits and attitudes are included in learning.

30. You are learning that learning is a CHANGE in BEHAVIOUR. So far you have learnt, learning is a (1) in (2) due to prior experience.

When an individual has no knowledge in a particular subject, when he has not formed habit or attitude towards somethings; but when he has experience in that subject and he gets KNOWLEDGE, he forms HABITS and he develops ATTITUDE - these all will result into the change of (3).

So the acquisition of (4), (5) and (6) are all included in learning.

(1) change  (2) behaviour  (3) behaviour
(4) knowledge  (5) habit  (6) attitude
31. When a child of one year saw a pot of boiling water, he approached it and touched it. His hand was burnt and he got a pain. Next time when the child saw the pot again, same incident happened, i.e., he touched it and it burnt his hand again. The boy was 'too young' to learn that his pain was caused by the hot pot.

In this case, we **cannot** say that learning has taken place because there **is not** a change in the child's behaviour.

(1) cannot  (2) is not

32. In the above situation, learning has not taken place because there was no change in the child's behaviour. The boy had experience but he couldn't understand it and couldn't apply it because of his young age.

In this case, it can be seen that learning hasn't taken place because the child was too **young** to learn it.

33. When a person cannot learn or do a certain task because he is too young and the organism is not ready to do so, he is said to be IMMATURE for learning or doing that task. If he is able to learn or to do a certain task, he is said to be MATURED to learn or to do that task.

So an individual will be able to learn something only when he is **matured** for learning that thing. If an individual is **immature** he cannot learnt it.

(1) matured  (2) immature
34. A girl of two years can learn to walk but cannot learn to write. It can be said that that girl is (1) matured/i mature for walking but (2) immature for writing.

(1) matured  (2) immature

35. Thus maturation (1) is/is not) essential in learning of the individual. Without maturation learning (2) (can/cannot) take place.

(1) is  (2) cannot

You have learnt about concepts of learning. Very good, please go ahead.

Exercise:

A. Please write 'T' against the true statement and write 'F' against the false one.

1. All human beings have to learn otherwise they wouldn't be able to adjust themselves to the environment.

T

2. A young child may be able to learn one thing while he cannot learn another thing.

T

3. Learning depends upon maturation and the ability to apply his prior experience.

T
4. Experience is not necessary for establishing learning.

5. Maturation and learning are the same thing.

6. According to learning, the change of behaviour must have been taken place temporarily.

7. The term 'behaviour' means action.

8. The behaviour can be divided into two groups.

9. Overt behaviour which can be observed.

10. We cannot measure the covert behaviour.

B. Define the term 'learning'

Learning is a (permanent) change in behaviour which is a function of prior experience, (or due to prior experience) (or learning is a modification of behaviour through experience).
Give one example or situation which is a matter of learning.

(You can give example in your own way)

For example, in his attempt to set up the antenna for television, at first Somchai did not know the direction to which the antenna wing must be set up. He, therefore, rotated the antenna around and found that when the antenna reached a certain position, the television produced the clear picture. Later when Somchai helped his neighbour to set up the antenna for television again he immediately rotated the wing of the short side of antenna towards the same direction (where the television is located). It is seen that he has learnt to set up the antenna.
UNIT - 2
THORNDIKE'S CONNECTIONISM
Programmed Learning material

36. When a person sees a very bright light e.g., the light from a flashlight which goes directly into his eyes, he will blink at once. From the example, the light is called as a (1) (stimulus/response) and the act of the person's blink is the (2).

---
(1) stimulus (2) response

37. When a boy hears the sound of horn of the bus it means that sound waves impinge upon his ears, and he, therefore, turns his bicycle to avoid being hit by the bus. Here the sound of the horn is a (1) and the act of turning the bicycle is a (2).

---
(1) stimulus (2) response

38. Certain responses seem automatically to follow a certain stimulation. We typically call these "unlearned responses."

When a person blinks when the light from a flashlight goes directly into his eyes, he has not to learn to blink, but it happens automatically. Therefore, this is the example of an _______ (learned/unlearned) response.

---
unlearned
39. A certain response is connected to a certain (1).
Find out from the following list which response in list B, is connected to the stimulus in list A, by writing the correct number from list B against the stimulus in list A.

<table>
<thead>
<tr>
<th>List A (Stimulus)</th>
<th>List B (Response)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2) Bright light goes directly into a person's eyes</td>
<td>1. jumps</td>
</tr>
<tr>
<td>(3) A boy steps on fire</td>
<td>2. Heart beats more rapidly</td>
</tr>
<tr>
<td>(4) Something very exciting happens to a lady</td>
<td>3. blinks</td>
</tr>
</tbody>
</table>

(1) stimulus (2) = 3 (3) = 1 (4) = 2

40. The boy who know English is asked "What is your name?" He answers "My name is Siri".

Here the question "What is your name?" is a (1) and the answer "My name is Siri" is a (2).

In this situation the (3) and the (4) are connected with each other.

(1) stimulus (2) response (3) stimulus (4) response

41. Then the boy is asked "How old are you?" His answer is "I'm ten years old."

In this situation the stimulus and response are connected with each other.
42. In the above frame the boy has learnt English. Therefore the responses are _______ (learned/unlearned) response.

Learned

43. Just as unlearned response is connected to a certain stimulus, similarly, a learned response is also _______ to a certain stimulus.

Connected

44. In theory of Connectionism, the learned responses are connected to certain stimuli, similarly unlearned responses are connected to certain _______.

Stimuli

45. Thorndike, an American psychologist, studied that a response is _______ (1) to a certain stimulus. Therefore he pronounced the theory called "Connectionist" or "Connectionist Theory".

In the above statement, the name of the mentioned theory is _______ (2).

(1) connected (2) Connectionism or connectionist theory
46. The theory which explains that a response is connected to a certain (1) is known as (2) theory.

(1) stimulus (2) connectionist

47. Thorndike says that learning takes place because there is a bond connection between a (1) and a (2).

(1) stimulus (2) response

48. In connectionist theory by American psychologist named (1) pronounced that there is a (2) connection between a stimulus and response.

(1) Thorndike (2) bond

49. When the right response follows a stimulus, it is said that the S – R bond has been established.

   The teacher showed the picture of a cat to a pupil. The pupil said, "It is picture of a cat."
   The teacher said, "You are right."

   In this case has S – R bond been established?

   Ans. _______ (yes/No)
   
   Yes
50. In the above example S - R (1) has been established because the pupil's response (2) (is/is not) rewarded.

(1) bond (2) is

51. After some time the picture of a zebra was shown to the pupil again and the pupil said that it was the picture of a zebra. The teacher said, "Good, it is the picture of a zebra."

In this example, the pupil's response is rewarded/not rewarded.

rewarded

52. Immediate response is possible if response is rewarded.

rewarded

53. Next time, again, the picture of a cat was shown to the pupil. The pupil immediately said that it was the picture of a cat.

Do you think that immediate response was due to the reward from the teacher?

Ans. ________ (Yes/No)

Yes
54. When the reward is given immediately after the response is made, the S - R bond formation takes place immediately.

55. The connectionist theory states that learning is a matter of S - R (1) connection.

According to the connectionist theory S - R bond is established when (2).
(a) response is rewarded immediately.
(b) response is rewarded later on.
(c) response is not rewarded.

(1) bond (2) (a)

56. S - R bond is formed when response is (1) immediately.

When S - R bond is (2) learning takes place.

(1) rewarded (2) formed

57. According to connectionism or connectionist theory, find the answer from the following.

S - R bond formation is
(a) learning
(b) maturation
(c) reward
(d) punishment

Ans. (a)
58. A small boy who wants to watch television in the absence of his parents is, therefore, obliged to operate the television by himself.

In operating television, there are a number of buttons to deal with. So it is _______ (easy/not easy) for an unlearned boy to operate it.

not easy

59. At first he tries to do various random activities which is called trial e.g., pressing some buttons, pulling them, rotating some movable buttons, etc.

In this trials he makes many errors before he succeeds in operating it.

errors

60. On subsequent trials he will make fewer errors. He will try and try and will make fewer and fewer mistakes till he succeeds.

What should this method of learning be called?

(a) Trial - and - error learning
(b) Stimulus - response learning
(c) Trial learning
(d) Error learning

(a)
61. The following day if the boy wants to watch television again he will try again as he has done the previous day but he will make (1) (fewer/more) mistakes and the time taken in trying to operate television will be (2) (less/more).

(1) fewer  (2) less

62. Eventually on his subsequent efforts he (1) (will/won't) be able to operate television as soon as he wants to watch it without any mistakes or errors.

How would you say that learning has taken place?

Ans. (2) (Yes/No)

(1) will  (2) Yes

63. In the above example, learning takes place by the method of (1). It means that trial is there and learning takes place by elimination of the errors or incorrect responses.

(1) trial - and - error  (2) elimination

64. According to the theory of Thorndike's connectionism, the definition of learning is S - R bond formation through the method of trial - and - error. An organism tries and tries till the response is rewarded.
Therefore, learning according to this theory is concerned with: (Select the answer from the right side).

(1) _____ bond formation
   (a) S – S
(2) _____ method
   (b) R – R
(3) Correct response is _____ (c) S – R
(4) Incorrect responses are _____ (d) trial – and – error
   (e) rewarded
   (f) eliminated

(1) (a) (2) (d) (3) (e) (4) (f)

You have learnt the theory of 'connectionism.' Now you will learn how S – R bond formation takes place and through which process. The process is TRIAL – AND – ERROR method of learning discovered by Thorndike. Please read Panel – 2 on page 13 and refer to the panel in answering the following frames:

Refer to Panel – 2 on page 13 for your answer.

65. American psychologist named Thorndike propounded a theory called e _____ (1) _____ and it is also called a trial and _____ (2) _____ learning.

(1) connectionism (2) error

66. Trial and error learning which can be called the theory of _____ (1) _____ is propounded by an American psychologist named _____ (2) _____.

(1) learning (2) Thorndike
67. Thorndike studied not only animal learning but also _______ learning.

68. In one of his experiments he placed a ___(1)____(2)___ in a ___(3)____.  

| (1) hungry | (2) cat | (3) cage |

69. Outside the cage he put ___(1)___ at some distance so that it would be used as a stimulus.

The food outside the cage is a ___(2)___ for the hungry cat.

| (1) food | (2) stimulus |

70. The cat used in the experiment was to be a hungry one so that it would try to ___(1)___ from the cage to obtain food.

The goal of the hungry cat was to obtain the ___(2)___.

| (1) escape | (2) food |
71. The cat would be able to escape by \(1\) a latch which would release the door lock. However, at first it did not know how to operate the \(2\).

(1) operating (2) latch

72. You are learning about 'LEARNING'. When the cat was put in the cage it made various movements in the effort. The goal of the cat in doing such movements was to \(1\) from the cage in order to obtain food because it was \(2\).

Here the hungry cat had to \(2\) to operate the release latch to open the door.

(1) escape (2) hungry (3) learn

73. At first the cat could not escape from the cage because it has \(\) (learnt/not learnt) how to operate the escape mechanism.

not learnt

74. Eventually the cat accidentally operated the release latch and escaped from the cage. Then it was rewarded with \(1\) that was outside the cage.

The cat could escape from the cage just by chance. Would you say that the cat has learnt to escape?
Ans. \(2\) (Yes/No)

(1) food (2) No
75. It can't be said that the cat has learnt to escape.
But it could escape just by _______.

---

chance

76. Then on the subsequent trials the activity of the cat had become (1) _______ (less/more) random for it focussed more and more on the release latch. As a result, the time taken to escape (2) _______ (increased/decreased).

---

(1) less (2) decreased

77. Finally the cat was able to operate the escape mechanism at once without difficulty. It wouldn't make mistakes any more.

How would you say that the cat has learnt to escape?
Ans. (1) _______ (Yes/No)

Would the cat make mistakes any more?
Ans. (2) _______ (Yes/No)

---

(1) Yes (2) No

78. Now we can say that the cat _______ (1) to escape because it did not make _______ (2).

---

(1) learnt (2) mistakes
79. The cat did not make mistakes because it has learnt to open the cage door after trial - and - error. Thus the learning of the cat has taken place by the method of trial (1) and error (2).

(1) trial  (2) error

80. There is gradual elimination of mistakes in trial-and-error (1) learning. And such learning is known as trial-and-error (2) learning.

(1) trial  (2) error  (3) trial-and-error

81. According to trial-and-error learning, does the new behaviour appear (suddenly/through the gradual elimination of incorrect responses)?

through the gradual elimination of incorrect responses.

82. It can be seen that learning takes place because of the elimination (1) of the incorrect responses and selecting the correct (2) response which is relevant to the situation.

(1) elimination  (2) correct
83. By nature, an individual likes to make correct responses, but doesn't like to make ______ responses.

incorrect

84. When there is a stimulus (situation) an individual will react in a number of ways. Then he will find a certain response that is relevant. That correct responses will be selected for use again in similar subsequent situations while those ______ responses will be eliminated.

(1) respond (2) incorrect

85. In the diagram dotted lines show the incorrect responses while the whole line is the correct response. The organism, during the first trials, selected R₁, R₂, R₃ responses. These responses were not rewarded therefore they are eliminated. The R₄ response was rewarded. Therefore it must be the correct one. R₄ stands for the correct response.

The above diagram explains the trial-and-error method of ______, where the connection between S - R bond takes place and will be selected for use subsequently. Here R₄ is the ______ (correct/incorrect) response and ______ (will be/won't be) selected for use subsequently.

(1) learning (2) correct (3) will be
Exercise:
1. Trial-and-error learning raises the probability of the correct response.
   True or false
   Ans. True

2. The connectionist viewpoints recognize learning as:
   (a) patterning into a unified whole
   (b) bond formation
   (c) habit formation
   (d) reinforcement

3. Learning is a bond connection between stimulus and:
   (a) animal
   (b) response
   (c) past experience
   (d) behaviour

4. The definition of learning according to the theory of connectionism must include 
   (1) bond formation
   through the method of (2) and a (3) of the correct response.

   (1) S - R  (2) trial-and-error  (3) reward
5. Define learning

---

Learning is a bond connection between stimulus and response.

6. Please explain trial-and-error learning

---

(You may answer as follows)

When there is a stimulus (situation) the organism will respond in a number of ways. The incorrect responses will be eliminated while the correct response will be selected to be used again in the similar situations.
UNIT - 3
PAVLOV'S CLASSICAL CONDITIONING
Programed learning material

1. Concept of 'Operant' and 'Respondent' Responses

86. If you put your pen on the table and at that time if somebody asks you, "Where is your pen?" You may answer in a number of ways, e.g., by saying "It is on the table"; or by saying, "There it is", or by pointing to it, etc. So this question _______(can/cannot) be answered in a number of ways.

   can

87. But if somebody ask you to sweat while you are standing still You _______(1) _______(will/won't) be able to do it.
   However, if you have to run a long distance you _______(2) _______(will/won't) sweat automatically.

   (1) won't  (2) will

88. After running if some one asks you to stop sweating at once, will you be able to stop?
   Ans. ________(Yes/No)

   No
89. Both the examples given above, i.e., 'answering a question' and 'sweating' are response but they are of _______ (different/same) kinds of responses.

different

90. The responses mentioned above are of different kinds. The responses that can be controlled by spoken instructions or requests are called 'RESPONSES' and the responses that cannot be controlled by spoken instructions or requests are called 'RESPONSES'.

From the above example, 'answering the question' is, therefore c____(1)___ and 'sweating' is r____(2)____.

(1) operant    (2) respondent

91. Responses are of two kinds i.e., (1)____(1)____(2)____. Operants are operant responses, similarly, respondents are respondent c____(3)____.

(1) operants    (2) respondents  (3) responses

92. The question "Where is your pen?" can be answered by grown up people but it _______ (can/cannot) be answered by very small children since they have not learnt to answer.

cannot
When the children grow up and learn to understand normal instructions they \((1)\) \(\text{will/won't}\) be able to answer the questions. Therefore answering the questions is OPERANT RESPONSE and it is not RESPONDENT response.

Weena could follow the teacher's instruction and also could answer his question. Here answering the question done by Weena is a/an \((2)\) and it is not a/an \((3)\) response.

\(\begin{align*}
(1) & \text{ will } \\
(2) & \text{ operant } \\
(3) & \text{ respondent }
\end{align*}\)

There are two kinds of responses. The first one is an \((1)\) \((2)\) and the other is a \((3)\) \((4)\).

\(\begin{align*}
(1) & \text{ operant } \\
(2) & \text{ response } \\
(3) & \text{ respondent } \\
(4) & \text{ response }
\end{align*}\)

In fact, a person must learnt before he can give a response called \((1)\) (operant/respondent) but he need not learn to give a response called \((2)\).

\(\begin{align*}
(1) & \text{ operant } \\
(2) & \text{ respondent }
\end{align*}\)

A person cannot make a response called operant until he has learnt how to make it. But a person \((\text{can/cannot})\) make a response called respondent without learning.
97. The responses that a person must learn to respond and which can be controlled by spoken instructions are called (1) (operants/respondents).

The responses which need not to be learnt and cannot be controlled by spoken instructions are called (2) (operants/respondents).

(1) operants  (2) respondents

98. A teacher of physical education says to the pupils, "Run across the field."

The pupils run across the field which is a long distance. As a result, they (1) (sweat/do not sweat) and they (2) (can/cannot) stop sweating by spoken instruction.

(1) sweat  (2) cannot

99. 'Running' is the response called (1) while 'sweating' is the response called (2).

(1) operant  (2) respondent

100. Define operant responses and give one example.

Operant responses are the responses that can be controlled by a spoken instruction.

Example: to ask a boy to run
101. Define respondent responses and give one example.

Respondent responses are the responses that cannot be controlled by a spoken instruction.

Example: sweating.

102. When we are asked a question we give the answer because we want to. This kind of response is called operant or EMITTED response.

Kowit was asked a question by his teacher and he gave answer because he wanted to. This kind of response is called operant or __________ response.

emitted

103. Among always goes to market by bus. In fact she can go to market by other means, e.g., by taxi, or by riding a bicycle or just walking. But she goes by bus because she wants to do so. Therefore going to market by bus is an example of __________ response and it is the response that is __________ (elicited/emitted).

(1) operant (2) emitted

104. When an organism wants to do something and does it, the response is an __________ (elicited/emitted) one.

Therefore operants are __________ (elicited/emitted) responses.

(1) emitted (2) emitted
105. Since the operant response is emitted by an organism, operants can be called responses.

106. All (1) (operants/respondents) are emitted responses while all (2) are not emitted responses.

(1) operants (2) respondents

107. We cannot control sweating by spoken instruction. Similarly, we cannot control salivating by (1) (2).

(1) spoken (2) instruction

108. Sweating is a kind of response called respondent or elicited response. Similarly, salivating is a kind of response called respondent or (1) (2).

(1) elicit (2) response

109. Sweating and salivating are the examples of (1) (operant/respondent) (2) or (3) responses because they can't be controlled by spoken (4).

(1) respondent (2) response (3) elicited (4) instruction
110. All (1) (operators/respondents) are elicited responses but all (2) (operators/respondents) are not elicited responses.

(1) respondents  (2) operators

111. Remember that operant responses are always emitted responses and respondent responses are always elicited responses.

Operant responses are always (1) responses and respondent responses are always (2) responses.

(1) emitted  (2) elicited

112. Sakia wants to listen to the radio. Therefore, listening to the radio is the response of the type called (1) response and it is (2) (elicited/emitted) response.

(1) operant  (2) emitted

113. Sakia can't help laughing when he hears a joke from the radio. Laughing when he hears the joke is the response called (1) response and it is (2) (elicited/emitted) response.

(1) respondent  (2) elicited
114. Emitted responses are (1) but elicited responses are (2).

(1) Operants  (2) Respondents

115. Operants are (1) responses but respondents are (2) responses.

(1) Emitted (2) Elicited

116. From the following responses, decide and write in the blanks against each activity with the word 'Operant' or 'Respondent' on the left side according to what you think it is, and 'elicited' or 'emitted' on the right.

(1) __________ Riding a cycle __________
(2) __________ Opening a door __________
(3) __________ Salivating __________
(4) __________ Watching T.V. __________
(5) __________ Blushing __________
(6) __________ Heart beating more rapidly __________

(1) Operant - Emitted
(2) Operant - Emitted
(3) Respondent - Elicited
(4) Operant - Emitted
(5) Respondent - Elicited
(6) Respondent - Elicited
117. Give definition of the following words by including the word 'spoken instruction', and 'elicited' or 'emitted' in the definition.

(1) Operant is the response that can be controlled by a spoken instruction which is emitted by an organism, e.g., singing a song.

(2) Respondent is the response that cannot be controlled by a spoken instruction which is elicited by a stimulus, e.g., shedding the tears from the eyes.

You have learnt about 'Operant responses' and 'Respondent responses'. Well, it will make you understand the theory of conditioning easily.

Please go on reading.

118. Pavlov, a Russian psychologist was also interested in learning. He wanted to know how certain responses were connected to stimuli. He discovered the theory of learning called 'CLASSICAL CONDITIONING.' Pavlov studied the responses known as 'respondents' which are elicited by stimuli and uncontrolled by spoken instructions.

Pavlov discovered the theory of (1) (2).

In this theory he was interested in (3) (elicited/emitted) responses or (4) (operants/respondents).

(1) classical (2) conditioning (3) elicited (4) respondents
So far as Pavlov's classical conditioning is concerned, it is necessary to put emphasis on respondents or \( (1) \) responses. Pavlov did not pay attention to operants or \( (2) \) responses.

Now let's talk about Pavlov's theory of learning, i.e., classical \( (3) \).

(1) elicited (2) emitted (3) conditioning

Please read the Panel - 3 on page 133 before you go on the next frames.

Please refer to Panel-3 page 133 for your answering.

If the sight of food does not elicit the response of salivating, the sight of food is called a 'neutral stimulus' because it has no power in eliciting the response.

When Mary, an American, saw 'Somtam' on the first occasion, her mouth did not salivate since she has never tasted it before. Therefore, for Mary the sight of 'Somtam' is a \( (1) \) stimulus which \( (2) \) (can/cannot) elicit the response.

(1) neutral (2) cannot
121. The sight of food will not elicit salivation in a small child either, if it is seen for the first time and never been tasted before.

Here the sight of food is a/an (1) (neutral/conditioned/unconditioned) stimulus which (2) (can/cannot) elicit the response of salivation.

(1) neutral (2) cannot

122. When 'Somtam' was put in Mary's mouth, the mouth started salivating. Here 'Somtam' is considered to be unconditioned stimulus.

Eating 'Somtam' started salivation (neutrally) therefore 'Somtam' now is a/an (1) stimulus and salivation in this case is called an unconditioned response.

(1) unconditioned (2) unconditioned

123. When food is put in the mouth, the mouth will salivate. Here the food in the mouth is an unconditioned stimulus and salivation is an unconditioned response.

The mouth salivates because of the food in the mouth. Therefore, food is a/an (1) stimulus and salivation is a/an (2) (conditioned/unconditioned) response.

(1) unconditioned (2) unconditioned
124. When Mary started eating 'Somtam' it means the sight of 'Somtam' which was a neutral stimulus at first (and would become a conditioned stimulus later) and eating 'Somtam' which was an unconditioned stimulus was paired together it elicited the response of salivation which was a/an _____ (conditioned/unconditioned response).

unconditioned

125. After frequent pairing the sight of 'Somtam' with eating 'Somtam' then the sight of 'Somtam' alone could elicit salivation in Mary's mouth. So the sight of 'Somtam' became conditioned stimulus and salivation due to the sight of 'Somtam' is known as conditioned response.

Mali saw 'Somtam' and her mouth began salivating because she used to eat 'Somtam' very often. Therefore the sight of 'Somtam' and eating 'Somtam' were paired together. Then the sight of 'Somtam' alone caused salivation. Here the sight of 'Somtam' was the _____ stimulus and the salivation was the _____ response.

(1) conditioned (2) conditioned

126. Formerly the sight of food cannot elicit the response of salivation. But after frequent pairing of the sight of food with eating food, the sight of food alone _____ (can/cannot) elicit the response.

Thus a neutral stimulus which will be conditioned when frequently paired with an unconditioned stimulus the neutral stimulus becomes the _____ stimulus and elicits the response known as _____ response.

(1) can (2) conditioned (3) conditioned
127. The neutral stimulus can only become the conditioned stimulus when it is frequently (1) with the (2) stimulus. The response elicited is called a/an (3) response. This is the process called (4) conditioning.

(1) paired (2) unconditioned (3) conditioned (4) conditioning

128. When the sight of food elicits salivation, we can say that the (1) (conditioned/unconditioned) stimulus has elicited a/an (2) (conditioned/unconditioned) response. This is the process called (3).

(1) conditioned (2) conditioned (3) conditioning

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Read Panel - 4 on page 133 before going to the next frames.
Refer to the Panel - 4 on page 133 for your answer.

129. From the above panel - 4, we can say that:
(1) __________________ is the unconditioned stimulus.
(2) __________________ is the unconditioned response.
(3) __________________ is the conditioned stimulus.
(4) __________________ is the conditioned response.

(1) Loudnoise
(2) Going away from the dog
(3) Sight of a dog
(4) Going away from the dog
130. The incident in the panel is an example of process called c. (1) __________. The child (2) __________ (has/has not) learnt to be afraid of dogs.

(1) conditioning   (2) has

131. Pratoom is afraid of darkness. It is not natural to be afraid of darkness because most human beings are not afraid of darkness.

Is Pratoom's fear for darkness conditioned?

Ans. (1) __________ (Yes/No). Pratoom (2) __________ (has/has not) learnt to be afraid of darkness.

(1) Yes   (2) has

132. It can be said that Pratoom's fear for darkness is not natural (1) __________ but (2) __________. Thus she has (3) __________ to be afraid of darkness.

(1) natural   (2) conditioned   (3) learnt

133. Let us see how Pratoom has learnt to be afraid of darkness.

At first Pratoom was not afraid of darkness. Therefore darkness is neutral stimulus. Similarly, if Somari is not afraid of darkness, it can be said that darkness is a _________ stimulus for Somari too.

neutral
134. Whenever Fratoom entered the dark room the cat in the room was frightened. It jumped and hit and she was very afraid.

Here, jumping and hitting by the cat is a/an un__ (1) __ stimulus, and fear which is elicited is an un__ (2) __ response.

(1) unconditioned  (2) unconditioned

135. Frequent pairing of darkness with hitting by the cat causes her to fear. Does darkness becomes a conditioned stimulus, then?

Ans. ____ (1) ____ (Yes/No)

Is hitting by the cat an unconditioned stimulus?

Ans. ____ (2) ____ (Yes/No)

Is fear caused due to hitting by the cat a conditioned response?

Ans. ____ (3) ____ (Yes/No)

(1) Yes  (2) Yes  (3) No

136. Later on Fratoom was conditioned to be afraid of darkness?

Is conditioned stimulus learnt?

Ans. ________ (Yes/No)

Yes
137. Frequent pairing of darkness which has to become a
(1) stimulus with hitting by the cat which is
an (2) stimulus causes fear which is an (3) response.

(1) conditioned (2) unconditioned (3) unconditioned

138. As a result, whenever Pratoom enters into the darkness,
she is afraid even when the cat is not present.

Here darkness is the (1) stimulus and fear
caused by darkness is (2) response.

Thus Pratoom has been (3) to be afraid of
darkness or her fear for darkness is (4) ed.

(1) conditioned (2) conditioned (3) conditioned (4) conditioned

139. From the following four statements, two statements are
right and the other two are wrong. Write 'right' or
'wrong' against each statement.

Pratoom is afraid of darkness because:

(1) She is conditioned to be afraid of darkness.
(2) She is unconditioned to be afraid of
darkness.
(3) She has learnt to be afraid of darkness.
(4) It is natural for Pratoom to be afraid
of darkness.

(1) right (2) wrong (3) right (4) wrong
140. To fear, to be brave, to hate, to love, etc., are all emotions.

   As the emotion of fear can be learnt by the method of conditioning, other emotions like being (1), (2), (3) etc., can be learnt by the method of (4).

   Learning of e (5) are possible by the method of (6).

   (1) brave or (2) hating (3) loving (4) conditioning (5) emotion (6) conditioning

141. Actually, different school subjects like English, Thai, arithmetic, geography, history etc., are neutral stimuli since we cannot expect that whether the students will like them or not. Similarly, algebra is also a ____ stimulus.

   neutral

142. Nipon likes algebra because his teacher is very sympathetic and capable to teach algebra.

   Formerly algebra was a (1) stimulus for Nipon. But when it was taught by a sympathetic and capable teacher, algebra has become a (2) (neutral/conditioned) stimulus.

   (1) neutral (2) conditioned
143. All students like to learn from a sympathetic and capable teacher. Here the sympathetic and capable teacher is a/an (1) stimulus and liking towards learning of algebra taught by that teacher is a/an (2) response.

(1) unconditioned (2) unconditioned

144. Algebra was frequently paired with sympathetic and capable teacher. Then the algebra which was a neutral stimulus because a (1) stimulus and sympathetic and capable teacher is an (2) stimulus and liking to learn from the sympathetic and capable teacher was still an (3) response.

(1) conditioned (2) unconditioned (3) unconditioned

145. Neutral stimulus when frequently paired with unconditioned stimulus, it becomes a/an (1) (2)

(1) conditioned (2) stimulus

146. Then Nipon likes algebra even though it is taught by other teachers. We can say that Nipon likes algebra because of the process called ______.

conditioning
147. Liking or disliking is an attitude. All types of attitude can be learnt by the method of conditioning.

148. All types of attitude can be learnt by the method of conditioning.

149. Now you are learning about the theory learning which is called conditioning. Pavlov, the propounder of this theory, called it 'CLASSICAL CONDITIONING'. Therefore, Pavlov was the person who propounded the theory of learning called (1) (2).

(1) classical (2) conditioning

PAVLOV'S EXPERIMENT:

You are learning about Pavlov's classical conditioning. Very good, you will understand more and more.

Please read panel - 5 on page 134 which is about Pavlov's experiment then come back to go on for the next frame.
Refer to Panel - 5 on Page 134 for your answering:

150. Classical conditioning, which is one of the theories of learning, has been propounded by (1) ______ who discovered it through his (2) ______.

(1) Pavlov (2) experiments

151. Read the panel - 5 again and refer to (b)
A dog is placed in a special room and made free from other distractions in order to ______ uncontrolled factors that might affect the result of the experiment.

eliminate

152. Please refer to (a) of the Panel - 5
The provision is there in order to measure the magnitude of the response, i.e., the ______ (quality/quantity) of salivation.

quantity

153. The sound of a bell itself does not stimulate the flow of saliva in the mouth of a dog. It is neutral which has no effect on salivation in the dog. Therefore the sound of the bell, in this case, is a ______ stimulus.

neutral
154. Please refer to (d) of Panel 5.

The 'neutral stimulus' means the sound of a ringing bell which (1) (2) effect on salivation.

---

(1) has (2) no

---

155. Since the sound of the bell has no effect on salivation before conditioning, it is called a ____ stimulus.

---

neutral

---

156. By nature, food can elicit salivation. Therefore, the food itself is an unconditional stimulus and salivation elicited by the food in the mouth is an unconditional response.

Meat, by nature, can elicit salivation. Therefore, meat is a/an (1) stimulus and salivation elicited by meat is a/an (2) response.

---

157. Please refer to (e) in the Panel 5.

As the food is presented in bell is rung. It is done so as to combine the (1) and the (2) together. Here there is simultaneously occurring of the two stimuli, i.e., (3) and (4). The sound is a conditional (5) and the food is an unconditional (6). Then conditioning is (7) (possible/not possible).

---

(1) food or sound (2) sound or food (3) sound (4) food (5) stimulus (6) stimulus (7) possible.
158. In Pavlov's experiment, the conditional stimulus, i.e.,
the sound of a bell and the unconditional stimulus, i.e.,
the food are presented simultaneously then will ____________
will take place.

conditioning

159. Conditioning will take place only when the e (1) ____________
stimulus and u (2) ____________ stimulus occur (3) ____________
(simultaneously/in extreme different time).

(1) conditioned (2) conditional (3) simultaneously

160. Please refer to (g) of the Panel - 5
The procedure for classical conditioning is to combine
a/an (1) ____________ stimulus with a/an (2) ____________ stimulus
repeatedly.

(1) conditional (2) unconditional

161. Please refer to (f) of the Panel - 5
The sound of a ringing bell alone can elicit salivation.
So the sound, in this case, is a/an (1) ____________ stimulus and
salivation is a/an (2) ____________ response. Such sequence will
happen only (3) ____________ (before/after) conditioning.

(1) conditioned (2) conditioned (3) after,
162. When Pavlov started the experiment, i.e., before the
dog had learnt to salivate due to sound of the bell,
the sound of bell was a/an _______ stimulus.

neutral

163. When the dog has learnt to salivate at the sound of
the bell, the sound of the bell becomes a/an _______ stimulus.

conditioned

164. Pavlov's experiment describes the process of a______.

conditioning

165. In Pavlov's experiment, the sound of the bell acquires
the power to elicit salivation. This process is
called ________.

conditioning

166. When a previous neutral stimulus acquires the power
to elicit a response, the process is called ________.

conditioning
167. After conditioning the sound of the bell elicits salivation in the mouth of the dog. So salivation in this case is not natural and automatic but it is a piece of LEARNED behaviour. It means learning has taken place in the dog.

168. If the stimulus is a conditioned one, then its response is also a conditioned response. But if the stimulus is an unconditional one, its response is a/an _unconditioned_ one.

169. Since the sound of the ringing bell is conditioned stimulus which elicits salivation. So salivation, in this case, is a/an _conditioned_ response.

170. When a conditioned response is not reinforced for a longer time conditioning is said to have extinguished. When the food does not follow the occurrence of the sound of the bell many a time, then the dog _won't_ (will/won't) salivate at the sound of the bell.
171. Classical conditioning can be extinguished or removed by presenting repeatedly the conditioned stimulus without accompanying the (conditioned/unconditioned) stimulus, i.e., representing the sound of the bell without presenting the ________.

(1) unconditioned (2) food

Panel - 5

172. In (j), the sound of the bell loses the power to elicit salivation because there is no ________ between the sound of the bell and the food any longer. Now the conditioning is said to have been ________, and the process is called ________.

(1) combination (2) extinguished (3) extinction

173. The theory of learning discussed above is called 'classical conditioning' which has been discovered by Pavlov.

Human beings as well as animals can be conditioned to respond to a particular conditioned stimulus. The process is called conditioning and it is known as Pavlov's ________.

(1) classical (2) conditioning
174. Conditioning means combining a conditional stimulus and unconditional or natural stimulus together. Therefore to remove conditioning, it is needed to destroy the combination between the (1) stimulus and the (2) stimulus.

(1) conditioned (2) unconditioned (natural)

175. In the process of EXTINCTION, conditioning can be removed by repeatedly presenting the conditioned stimulus without accompanying the unconditioned stimulus.

unconditioned

176. When a conditioned stimulus is repeatedly presented without accompanying the unconditioned stimulus, then the conditioned stimulus will lose its power to elicit that response, and then conditioning is said to have been (1) and the process is called (2).

(1) extinguished (2) extinction
Exercise:
A. Please fill in the blank with word or words:
1. Classical conditioning has been discovered by a Russian psychologist named ________
   Pavlov

2. Is classical conditioning the process in which a previous neutral stimulus acquires the power to elicit a response?
   Ans. ________
   Yes

3. Can types of reflex be learnt by the method of conditioning?
   Ans. ________
   Yes

4. Can all types of emotion be learnt by the method of conditioning?
   Ans. ________
   Yes

5. Can all types of attitude be learnt by the method of conditioning?
   ________
   Yes

6. Conditioning as a method of learning plays major role in learning of ________ (attitude/concept/fact/skill)
   ________
   attitude
7. Learning to dislike algebra which is the result of monotonous drill illustrates the principle of **conditioning**.

8. In classical conditioning there is a pairing of **(1) conditioned** and **(2) unconditioned (or natural)** stimulus.

9. Is classical conditioning a stimulus substitution?
   
   Ans. **Yes**

10. Is salivation due to the food in the mouth considered to be the result of conditioning?

   Ans. **No**

11. Is salivation due to the sight of a mango considered to be the result of conditioning?

   Ans. **Yes**

12. Classical conditioning is **(You are right if you answer similar to the following).**

   The process in which a previous neutral stimulus which has no power to elicit a response acquires the power to elicit a response by pairing it with a natural or an unconditional stimulus.
13. The process of extinction is to present conditioned stimulus repeatedly without accompanying the unconditioned stimulus.

14. After extinction, a previous conditioned stimulus will ________ (have/not have) power to elicit the response.

3. The following are the steps for classical conditioning but they are not arranged in an order. Please re-arrange them by writing the number of each step:

- (a) CS + UCS → UCR
- (b) NS → No response
- (c) UCS → UCR
- (d) CS → CR

(a) = 3  (b) = 1  (c) = 2  (d) = 4
UNIT - 4

SKINNER'S OPERANT CONDITIONING

Programmed learning material

177. If somebody tells you to raise up your hand, you can do it at once, but if he tells you to salivate you \( (1) \) (will/won't) be able to do it.

won't

178. Raising up the hand and salivating are the examples of two different kinds of responses, i.e., (1) the response which can be controlled by spoken instruction, and (2) the response which cannot be controlled by spoken instruction.

In the example above, the response which can be controlled by spoken instruction is \( (1) \) and the response which cannot be controlled by spoken instruction is \( (2) \).

(1) raising up the hand (2) salivating

179. The technical term to be called for the response which can be controlled by spoken instruction is OPERANT and the other one which cannot be controlled by spoken instruction is RESPONDENT.

Operant is the response emitted by an organism but respondent is the response elicited from an organism by a stimulus.

Therefore in the given example raising up the hand is a/an \( (1) \) (operant/respondent) and salivating is a/an \( (2) \).

(1) Operant (2) respondent
Operants are responses or behaviors emitted by an organism, such as doing exercise and it is, therefore, (1) (external/internal) which can be observed.

Respondents are the responses elicited by certain stimuli, such as salivating to the food in the mouth. So it is (2) (external/internal).

---

(1) external (2) internal

---

Most of human behaviors such as reading a book, eating food are Operants in character but not in character.

---

respondent

---

We have discussed about classical conditioning of Pavlov, and now we are about to discuss 'operant conditioning' which has been discovered by Skinner.

Therefore it can be said that Skinner is the person who has propounded the theory named o (1) (2)

---

(1) operant (2) conditioning

---

Sompang wanted to learn English. He learnt it because he (1) to learn. Here the response is learning and it is an emitted response which is an operant one. So operant response is the response that is e (2)

---

(1) wanted (2) emitted
184. According to Skinner, when an individual does something, he does it because he wants to. Therefore the response is considered to be (1) emitted (elicited/omitted) which is called (2) operant/respondent.

(1) emitted  (2) operant

185. Skinner studied about (1) conditioning while Pavlov studied about (2) conditioning.

(1) operant  (2) classical

186. Operant behaviour is the behaviour that is emitted while respondent behaviour is the behaviour that is elicited.

Skinner studied about (1) response and (2) conditioning.

(1) emitted  (2) operant

187. Pavlov studied about (1) response and also (2) conditioning and the behaviour which he studied was not an operant but it was a (3) one.

(1) elicited  (2) classical  (3) respondent
According to Skinner, it is believed that the situation causes the individual to (1) (elicit/emit) the operant. Therefore the operant behaviour is a kind of response which is (2) (elicted/ emitted) without the force of any particular stimulus.

But according to Pavlov, it is believed that a stimulus elicits the response from an organism. So the respondent is the response that is (3) (elicited/ emitted) by the force of a particular (4).

---

1. (1) emit (2) emitted (3) elicited (4) stimulus

---

A force of a particular stimulus causes a respondent (1), but the operant response is not caused by a force of any particular (2).

---

1. (1) response (or behaviour) (2) stimulus

---

Operants operate upon a situation and sometimes seem to be uncaused or it can be said that they do not seem to be elicited by any specific stimulus but they appear to be emitted by an organism.

---

Operant behaviour will be emitted if the behaviour is strengthened which is also called REINFORCEMENT. When will the operant behaviour be emitted?

Ans. When the behaviour is (1) which is also called (2).

---

1. (1) strengthened (2) reinforcement
192. Reinforcement means strengthening of the behaviour. The behaviour is strengthened by reinforcement.

193. Strengthening of the behaviour means that behaviour will occur again. When the behaviour occurs again and again we can say that it is strengthened and it is strengthened because of reinforcement.

194. Strengthening of the behaviour is due to reinforcement.

195. When the behaviour is approved we can say that it is reinforced. The behaviour will occur again if that behaviour is reinforced.

196. Reinforcement is (1) (needed/not needed) for operant response because the response will be (2) (strengthened/weakened) by following it with something reinforced.

(1) needed  (2) strengthened
197. Giving candy to child reinforces the behaviour of asking for the candy by the child. Therefore giving candy is termed as _______ (respondent/reinforcement).

reinforcement

198. When the reinforcement which is given, strengthens the behaviour, it is called a positive reinforcement. So giving candy to the child is _______ reinforcement.

positive

199. The teacher said to the pupil that his answer was right. This approval is _______ reinforcement.

positive

200. The second type of reinforcement which is opposite to the first one - positive reinforcement is _______ reinforcement.

negative

201. In negative reinforcement, a response strengthened by the removal or avoidance of an unpleasant stimulus.

A dog can learn to jump over a barrier in order to avoid or escape an electric shock is an example of _______ (negative/positive) reinforcement.

negative
202. A student can become regular in doing homework in order to avoid or escape scolding from the teacher. This is an example of (1) (2).

(1) Negative (2) reinforcement.

203. In negative reinforcement, a response is (1) (strengthened/weakened) by the removal (2) or a (3) of an unpleasant stimulus.

(1) strengthened (2) removal (3) avoidance

204. Just as pleasant stimulus is called positive reinforcer, the unpleasant stimulus is called negative reinforcer.

205. Positive reinforcer strengthens the behaviour similarly negative reinforcer also (1) the (2).

(1) strengthens (2) behaviour

206. Some students do assignments just to terminate (1) (pleasure/displeasure).

Whenever students do assignments the teacher would not be (2) (pleased/displeased).

(1) displeasure (2) displeased
207. If the teacher is happy students are also ____(1)__. Therefore displeasure of the teacher causes ____(2)__ in the students in the class.

(1) happy     (2) displeasure

208. The students do assignments because they want to avoid displeasure. So by avoiding displeasure ____(1)__ (strengthens/weakens) the behaviour of doing assignments. This is the example of negative ____(2)__.  

(1) Strengthens     (2) reinforcement

209. In the example, the behaviour of doing assignment is strengthened by ____(1)__ displeasure. This is the example of negative ____(2)__.  

(1) avoiding     (2) reinforcement

210. In negative reinforcement, an organism does some thing to avoid some thing. In the above example the students do assignments to avoid ____(1)__ (pleasure/displeasure). This is an example of ____(2)__ reinforcement.

(1) displeasure     (2) negative
211. Doing assignments to avoid displeasure is an example of (1) negative (2) reinforcement.

(1) negative (2) reinforcement

212. But if a student draws a picture and then shows it to the teacher, the teacher says that it is a very nice picture, this is an example of (1) reinforcement. This is an example of (2) (3) because the approval of the teacher will (4) (strengthen/ weaken) the behaviour of drawing picture.

(1) positive (2) positive (3) reinforcement (4) strengthen

213. The example given above is positive reinforcement because when the approval is (5) (given/stopped giving) it strengthens the behaviour.

214. A young child goes to nursery school. At school he is given chocolate, so he goes to school every day. Here chocolate is the (1) (2).

(1) positive (2) reinforcement
In the situation, going to school is an example of (1) operant/respondent and chocolate is considered to be a positive (2) which makes the child (3) go/stop going) to school regularly.

(1) operant (2) reinforcement (3) go

You are learning about operant conditioning in which the process of reinforcement is very important.

Skinner has said that if a particular response is reinforced, the organism (will/won't) emit that kind of response again.

will

Operant conditioning is very useful in training animals. In training, an animal will be reinforced after it has performed correctly what we want it to perform.

A hungry animal wants (1), a thirsty animal wants (2).

When a hungry or thirsty dog is trained to stand on its two legs, the dog will be (3) with food/water after it has stood on its two legs.

(1) food (2) water (3) reinforced

Hunger for food or thirst for water 'motives' the animal for training. It is difficult to train an animal if it (1) has/has no) motivation.

It is difficult to train a child if it has no (2).

(1) has no (2) motivation
219. It is not difficult to (1) ___ a child if it has (2) ___.

(1) train  (2) motivation

220. An animal or a child can be trained to perform if it has ________

motivation

221. In operant conditioning the role of motivation and reward is stressed.

Before the hungry animal gets food it has ___(1)___ (motivation/reinforcement).

The trainer reinforces the hungry animal by giving food ___(2)___ (before/after) it has performed correctly. Therefore the food is the ___(3)___ (motivator/reinforcer) given to the hungry animal.

(1) motivation  (2) after  (3) reinforceer

222. For a hungry dog, need for food is the motivation. When the dog stands on its two legs, the food is given to it and the food is the reinforceer.

For a hungry child, need for food is the ___(1)___.

When the child performs as what his mother wants, he is given chocolate. Here chocolate is the ___(2)___.

(1) motivation  (2) reinforceer
223. Select the correct answer from the following and fill it in the blanks: (reinforcement, response, motivation, stimulus).

An animal is hungry therefore it has (1) for food.
A dog is trained to stand on its two legs, therefore standing on two legs is a (2).
When the dog stands on its two legs, it is given food. Here the food is the (3).

(1) motivation (2) response (3) reinforcer

224. If the response of the animal is followed by reinforcement similar response will occur (1) (more/less) frequently, but if its response is not followed by reinforcement, similar response will occur (2) (more/less) frequently.

(1) more (2) less

225. Food given to an animal will not reinforce its performance if the animal is not hungry. Similarly, chocolate given to a child will not reinforce his or her performance if he or she is not.

hungry

226. The food is not a reinforcer if the animal (1) (is/is not) hungry. So, in order to make sure that the animal will perform as required, that animal should be kept away from eating (2) for some time. This shows that motivation
and reinforcement ___(3)___ (are/are not) necessary in operant conditioning.

(1) is not  (2) food  (3) are

227. Motivation and reinforcement are necessary in ___(1)___ or ___(2)___.

(1) operant  (2) conditioning

228. In operant conditioning, motivation and _______ are necessary.

reinforcement

229. In operant conditioning, _______ and _______ are necessary.

(1) motivation  (2) reinforcement

230. Somchai tunes the radio and he hears a song from that radio. In this example, tuning the radio is the response (R) and the song from the radio is the stimulus (S).

In this example which Somchai tunes the radio before he hears the song the example of bonding between S - R or R - S. Here S stands for stimulus and R stands for response.

Ans. _________.

R - S
231. In operant conditioning, reward or reinforcement is a ___(1)___ (stimulus/response) and operant behaviour is a ___(2)___ (stimulus/response).

(1) stimulus (2) response

232. S stands for ___(1)___ (stimulus/response) and R stands for ___(2)___.

(1) stimulus (2) response

233. In operant conditioning, ___(1)___ (R-S/S-R) chain is formed, but in classical conditioning ___(2)___ (R-S/S-R) is formed.

(1) R - S (2) S - R

234. Operant conditioning is ___(1)___ (stimulus/response) oriented but classical conditioning is ___(2)___ oriented.

(1) response (2) stimulus
THE OPERANT EXPERIMENT BY SKINNER

You are learning about Operant Conditioning. Please turn to Panel 6 on page 13b and read it, then come back again.

Please refer Panel 6 page 13b for your answer.

235. Operant conditioning has been discovered by (1) as a result of his (2).

(1) Skinner (2) experiments

236. Please refer to (b).

Skinner develops a kind of box in order to (1) uncontroller factors that might affect the result of the experiment. That particular box, then, is called the (2) (3) by the people for it has been designed by (4).

(1) eliminate (2) Skinner (3) box (4) Skinner

237. Please refer to (c).

This provision is made in order to obtain the frequency of operant _______ in a certain period of time.

behaviour (or response)
238. Please refer to (e)

The lever is connected to the delivery of food by some mechanism which, if pressed, the _____ will be presented to the rat in the box, which will reinforce the behaviour.

food

239. The food provided is a _____ for the hungry rat.

reinforce

240. The food provided is of reinforce. When the rat is reinforced it will _____ the lever again and again to obtain food.

press

241. The frequency of pressing the lever by the rat _____ (increases/decreased) because of reinforcement.

increases

242. The rat presses the lever more frequently because it is r____(1)____ with the food delivered, and learning ____ (2) has/has not) taken place.

(1) reinforced (2) has
243. When the rat presses the lever more frequently to obtain more food, it can be said that learning has taken place.

244. The rat as well as human being emit operant response after it/he is reinforced. And it/he will be reinforced when it/he emits the required response. This process is technically called operant conditioning.

245. The rat emits operant response after it is reinforced. Similarly, human being also emits an operant response after he is reinforced.

246. The rat is reinforced only when it emits the required response. This process is called operant conditioning. Similarly, human being is reinforced only when he emits the required response. This process is called operant conditioning.

1. response 2. operant 3. conditioning
247. In operant conditioning, the rat emits the required response after it is reinforced. The required response is called an operant response which is emitted. Similarly, human being emits the required response after he is ______(1)_____. The required response is called an operant response which is ______(2)_____.

(1) reinforced (2) emitted

248. Since the animals as well as human beings emit operant response after they are ______(1)_____, and they will be reinforced only when they emit the ______(2)____ response. This process is technically called an ______(3)____ (4)____.

(1) reinforced (2) required (3) operant (4) conditioning

249. Define operant conditioning.

In operant conditioning the organism will be reinforced when it emits the required response and when it is reinforced will emit the response more frequently.

250. To dial a telephone is a/an ______(1)____ (operant/classical) conditioning because reinforcement of hearing the voice won’t be got if an individual ______(2)____ (does/does not) carry out the activity.

In this example, to dial the telephone is operant ______(3)____ (response/stimulus) and hearing of the voice is the ______(4)____ (response/reinforcement).

(1) operant (2) does not (3) response (4) reinforcement
251. In the above example, hearing of the voice is the reinforcement which is provided _____ (before/after) the response of dialing the telephone is made.

______________________________

after

______________________________

252. In operant conditioning, reinforcement is provided after the _____ is made by the organism.

______________________________

response

Exercise:
1. Operant conditioning has been propounded by _____.

______________________________

Skinner

______________________________

2. Operant is a response or a behaviour _____ (elicited/emitted) by an organism.

______________________________

emitted

3. Operant behaviour _____ (can/cannot) be made through a spoken instruction.

______________________________

can

4. In operant conditioning, reinforcement _____ (is/is not) necessary.

______________________________

is
5. Close continuity is followed in operant conditioning and \((S - R/R - S)\) chain is formed.

\[ R - S \]

6. In operant conditioning, reinforcement is provided \(\underline{\text{before/after}}\) the required response is made by an organism.

\[ \underline{\text{after}} \]

7. Explain operant conditioning and give one example.

( Guideline for answering) When an organism emits operant behaviour and is reinforced, the organism will emit that behaviour more frequently because it has learnt that behaviour which is reinforced. For example, when a boy begins to cry his parent gives him sweets and he stops crying. Next time when the boy wants sweets he will cry again. Sweets are the reinforcer to promote crying of the child in order to get sweets from the parents.

8. According to the operant conditioning just mentioned, what should be the method of stopping the boy permanently from his being frequently crying in order to draw attention from adult?

(a) Comfort the child when he cries.
(b) Give him sweets to make him stop crying.
(c) Neglect him, not pay attention to him.
(d) Punish, the crying child.

\[ (c) \]
UNIT - 5
GESTALT'S COGNITIVE OR FIELD THEORY

Programmed learning material

253. If you show this figure - [ ] to different persons and ask them what it is, it is because an individual perceives the object not by parts but as a whole, so the answer may be as follows:

"It is a square," or
"It is a suitcase," or
"It is a handkerchief," or
"It is a book," or
etc.

The answer may be as shown because the object is perceived as a whole.

254. In general an individual perceives an object by the (1) whole (2) parts but not by (2) whole (1) parts.

255. Perceiving objects by the whole but not in parts or details is the theory of GESTALT PSYCHOLOGY.

According to this theory, an individual perceives every object - figure, shape and configuration as a whole. This is the theory called (2) Gestalt psychology.

(1) whole  (2) Gestalt
256. Gestalt psychologists put emphasis on the \( (1) \) thing, not on its \( (2) \).

\( \underline{\text{(1) whole (2) parts}} \)

257. The term 'Gestalt' is a German word which means, shape, form, configuration, or organization.

The word 'Gestalt' is a \( (1) \) word. It means a \( (1) \); a \( (2) \); a \( (3) \); a \( (4) \); a \( (5) \); an \( (6) \).

\( \underline{\text{(1) German (2) pattern (3) shape (4) form (5) Configuration (6) organization}} \)

(From \( (2) \) to \( (6) \) they can be arranged in any order).

258. This theory may be called COGNITIVE theory and FIELD theory, which puts emphasis on the whole or 'Gestalt' (in German).

The meaning of 'GESTALT' is p. \( (1) \); s. \( (2) \); f. \( (3) \); c. \( (4) \) or c. \( (5) \) and it is emphasized by the COGNITIVE or \( (6) \) theory.

\( \underline{\text{(1) pattern (2) shape (3) form (4) configuration (5) organization (6) field}} \)

259. We are talking about the theory of learning called \( \underline{\text{(cognitive or field theory/classical conditioning/operant conditioning)}} \).

\( \underline{\text{cognitive or field theory}} \)
260. We are talking about the theory of learning called
(1) __ or (2) __ theory.

(1) cognitive  (2) field

261. When the learner perceives the object or situation as a
whole, learning takes place through the process of
insight. This is called (1) __ or (2) __ Theory.

(1) cognitive  (2) field

262. According to cognitive or field theory, learning takes
place through the process of __________.

insight

263. According to Gestalt points of view, 'A' is perceived by
the matured individual as 'A' (first alphabet in English),
and not as only three lines because there is interaction
with his environment.

Do you think it is so because an individual perceives
the whole figure?

Ans. __________ (Yes/No)

Yes
264. A teacher puts a problem to his class. He draws and asks what it is, the answer given are as follows:

"It is a square"
"It is a suitcase"
"It is a handkerchief"
"It is a book"

etc.

These are four different solutions because different persons perceives it (according/not according) to his own IMAGINATION or IDEA or PERCEPTION.

265. Gestalt's cognitive or field theory is concerned with INSIGHT.

A boy wants to get a toy on the shelf but he cannot reach it. He sees a stool in the room. So he draws the stool beneath the shelf and stands on the stool to get the toy from the shelf.

This happens because the boy suddenly gets perception or imagination or idea of the relationship between the stool, his height and the position of the shelf. This type of learning is called Gestalt cognitive or field theory which is concerned with ________.

---

You are learning the theory called cognitive or Field theory. Good! You will understand more. Please read Panel-7 page 137 before you go on to the next frames.
266. From the given situation, at first the girl has a problem to solve. That problem is ________________
(to push the chair/to stand on the table/to get the sweet).

______________

to get the sweet

267. When the girl is confronted with a new similar problem, she draws upon the pattern of her past experience to help her understand the new situation then the problem (will/won't) be solved.

______________

will

268. When the relationship among the elements are perceived an individual is said to have achieved INSIGHT into the problem.

In the mentioned case, when the girl perceives the relationship among the (1), the (2) and the position of the (3), it can be said that she has achieved (4) to solve the problem of getting the sweet.

______________

(1) chair (2) table (3) sweet (4) insight
269. When the girl can get the sweet, it can be said that she has achieved an ____ for reaching the solution of the problem.

---

insight

---

270. In this problem, the child is able to perceive ____ among the chair, the table and the position of the sweet which is perceived as the ____ (whole/parts of) situation.

Remember that to a learner the WHOLE is more important than its ____

---

(1) relationships  (2) whole  (3) parts

---

271. Insight in a learning situation means the individual is able to understand the situation as a ____ and not as parts.

You are learning about the process of INSIGHT in a ____ situation.

---

(1) whole  (2) learning
272. Is it true or false if we say that a person discovers a relationship means and ends in any problem or a meaningful relationship among the various parts of the situation he is said to have insight into the problem?

Ans. ________ (True/False)

True.

273. When we struggle with a problem, the solution may come to us all of a sudden. The quick change in our perception or a grasp of understanding is known as ________ in learning situation.

insight

274. 'Insight is generally referred to as the sudden discovery of means-end relationships in problem solving situation. When an individual grasps a sudden achievement of a meaningful relationship among the various parts of the situation, it can be said that he has ________.

insight

275. When can we say that learning has taken place? According to cognitive or field theory of learning, when an individual has insight, it can be said that ________ has taken place.

learning
276. According to cognitive or field theory of learning, when an individual has (1) , it can be said that (2) has taken place.

(1) insight (2) learning

277. As we know, cognitive or field theory of learning is formulated by Gestalt psychologists. The theory is associated with the name of Wolfgang Kohler who conducted a series of experiments on chimpanzees and you will learn how the chimpanzees learnt to solve its problem.

The name of the psychologist who conducted his experiment on chimpanzees is ________.

Kohler

Please turn to Panel - 8 page 137 and read it. Then come back here. Please turn to read it you will find it quite interesting.

Refer to Panel - 8 page 137 for your answer.

278. The experiments mentioned in the panel were conducted by (1) ________ on (2) ________.

(1) Kohler (2) Chimpanzees
279. In the experiments, the chimpanzee is confronted with a problem. In this case, the problem is to 

get a banana

280. The experiments by Kohler show that the animal must p (1) the whole situation and r (2) among all relevant parts of the problem before insight can occur in solving the (3).

(1) perceive (2) relationship (3) problem

281. In order to solve the problem, at first the chimpanzee must understand the _______ (whole/parts of) situation.

whole

282. The chimpanzee understands the new situation because the _______ (past/present) experience helps him.

past

283. To solve the problem, when the chimpanzee perceives the essential means-end relationship (1) (insight/imagination) is said to have taken place, and as a result, the problem is (2)ed

(1) insight (2) solved
284. The problem has been solved because (1) learning (2) insight has taken place through (2) (insight/trial-and-error).

(1) learning (2) insight

285. According to Gestalt cognitive or field theory, an animal or man learns to solve the problem by insight.

insight

286. When an animal or man has insight, learning is said to have taken place.

taken place

287. When an animal or man has insight, learning is said to have taken place.

learning
Exercise:

Write 'true' in front of the true statement and write 'false' in front of the false one.

1. 'Gestalt' is the name of a particular psychologist.

false

2. According to Gestalt's cognitive or field theory, the whole is emphasized.

true

3. According to Gestalt's cognitive or field theory, learning takes place because of insight.

true

4. Before an individual can solve the problem, he must understand the whole situation.

true

5. The term 'insight' means trial-and-error.

false

6. Insight may be defined as a sudden reorganization of experience.

true

7. According to Gestalt's theory of learning, the whole is more than the sum of its parts.

true
8. Previous experience is not necessary in promoting insight to the solution of a new problem.

- - - - - - - -
false

9. The sudden discovery of means-end relationship in problem solving is generally known as insight.

- - - - - - - -
true

10. According to cognitive or field theory, an organism can solve the problem by trial-and-error.

- - - - - - - -
false

11. When an individual has insight, learning is said to have taken place.

- - - - - - - -
true
UNIT 6

THE LAW OF LEARNING

Programmed learning material

288. Thorndike has the credit of the first explicit formulation of the major laws of learning. These laws are originally the outgrowth of experiments in the field of animal psychology. Consequently, it can be said that the person who has formulated the laws of learning is

Thorndike

289. The law of learning

1. Law of Readiness
2. Law of Exercise
3. Law of Effect

The laws, as originally formulated by Thorndike, are consisted of the law of readiness, the law of exercise and the law of effect. They are, therefore, in number.

three
290. The three laws of learning are as follows:
(1) the law of _____, (2) the law of _____ and
(3) the law of _____.

(1) readiness (2) exercise (3) effect.

291. The fact known as the laws of learning grew out of
Thorndike's experiments in the field of animal psychology
conducted on ________ (human beings/animals)

animals.

1. The Law of Readiness.

292. Now let's talk about each law in details, one at a time,
beginning with the first law, i.e., the law of _______.

readiness

293. A pupil is prepared to learn a new lesson means he/she
is ready to learn the new _______. To be prepared
means to be _____.

(1) lesson (2) ready
294. Readiness means the preparation for action. Sada is prepared to learn a new lesson. It means she is _______ to learn that new lesson.

295. Thorndike uses illustrations of an animal running after its prey getting (1) (ready/not ready) all the while, jumping upon it and seizing it.

Similarly, a child sees an attractive object at a distance, get (2) to approach it, and seize it.

(1) ready (2) ready

296. To get ready to read means to approach a book, to seize it, to open it and finally to read it. All the sequential actions show that the learner is getting _______ to read the book.

ready

297. Thorndike says that it is the neurones which prepare the learner for later action in the sequence.

To get ready to swim means to approach the river bank, look at the river, raise the hands, jump into the water and swim. According to Thorndike, the later action is prepared by _______.

neurons
298. 

```
Stimulus

Response

'S' stands for _____ and 'R' stands for _____

---
```

---

299. The teacher asks the class, "Do you want to hear a story?"
In this statement the stimulus or situation created by
the teacher is the question asking the class" ________?

---

300. In the above frame, "Do you want to hear a story?" is
a _______ (stimulus/response).

---

301. The pupils in the class reply, "Yes, we want to hear a
story". This answer is the ________ (stimulus/response).

---
302. The teacher wants to tell a story and the pupils want to hear the story. Therefore we can say that in this class situation, S - R bond is established.

When ______ bond is ready to act, learning is possible.

---

S - R

303. When there is an appropriate response to the stimulus (situation), it can be said that ______ (S / R / S-R) bond has been established.

---

S - R

304. When there is no appropriate response to the stimulus (situation), it can be said that S - R bond ______ (has/ has not) been established.

---

has not

305. Learning is stimulus - response (S - R) bond formation.

When students are able to answer the teacher's question, it can be said that ______ (1) has taken place or s ______ (2), r ______ (3) bond has been established.

---

(1) learning (2) stimulus (3) response
306. The teacher, Mr. Sombat, says to the pupils "Now you solve the problem."

This statement is a (1) (stimulus/response).

Then the pupils say, "No we don't want to solve the problem."

Here the answer is a (2) (stimulus/response).

But in this case the bond between the (3) and (4) is (5) (strengthened/not strengthened).

(1) stimulus (2) response (3) stimulus (4) response (5) not strengthened

307. Stimulus - response bond can be called a 'conduction unit.'

(1) - response bond can be called a (2) unit.

(1) stimulus (2) conduction

308. Conduction unit is a stimulus - _________ bond formation.

response

309. Stimulus - response bond can be called a (1) (2).

(1) conduction (2) unit
When the bond between stimulus and response has been established, Thorndike says that a conduction unit is ready to conduct.

(1) conduction  (2) unit

When the bond between stimulus and response is established, Thorndike says that a conduction unit is ready to conduct.

When a conduction unit is ready to conduct, conduction by it satisfying.

The teacher, Mr. Sombat asked the class, "Do you want to hear a story"? The pupils replied, "Yes, we want to hear a story."

In this example, the conduction unit is ready to conduct.

When the pupils are ready to learn we can say that a unit is ready to conduct.

conduction
314. When a conduction unit is ready to _____, conduction by it is satisfying.

The teacher said to the class, "Look at this picture." The pupils looked at the picture and were found very attentive in observing the picture.

Here a ____ (2) ____ (3) is ready to conduct, conduction by it is satisfying. This is confirmed by the fact that the pupils were ____ (4) ____ (satisfied/annoyed) in observing the picture.

(1) conduct  (2) conduction  (3) unit  (4) satisfied

315. When a conduction unit is ready to conduct, conduction by it is satisfying.

When a conduction unit is ready to conduct but NOT to conduct is _______ (satisfying/annoying).

annoying

316. Pupils wanted to play football on playground and they were allowed to do it by their teacher. However, they could/so out to play because it began to rain.

Here conduction unit is ready to conduct but not to conduct is ____ (1) ____ (satisfying/annoying). Therefore the pupils were ____ (2) ____ ed.

(1) annoying  (2) annoyed
317. When a conduction unit **UNREADY** for conduction and it is forced to conduct, conduction by it is annoying.

The pupils were asked to read poems in the class but they were not ready to read them. This is the example of conduction unit **(1)** for conduction.

The teacher forced them to read the poems, therefore, they were **(2)**.

(1) unready (2) annoyed

318. When a conduction unit is **(ready/unready)** for conduction and it is forced to conduct, conduction by it is **(2)**.

(1) unready (2) annoying

319. When a conduction unit is ready to conduct, conduction by it is **(1)**. But when conduction unit is not ready to conduct, and yet it is forced, conduction is **(2)**.

(1) satisfying (2) annoying

320. Which was eager to paint and the teacher allowed him to do so. Therefore he was satisfied.

This happens because when a child is allowed to do or to express for which he/she is ready to do, it causes,

satisfaction
321. In algebra class, Somseak wanted to show how to solve the problem to the class but his teacher did not allow him. Therefore he was ___(1)____ (satisfied/annoyed).

This is according to the law of readiness which states that when a conduction unit is ready to conduct, not to conduct is ___(2)____.

(1) annoyed  (2) annoying

322. In that class, Eecha did not want to solve the problem but the teacher forced him to go to the blackboard to solve the problem. As a result, Eecha was ___(1)____ (satisfied/annoyed). This is according to the law of readiness which states that when a conduction unit is unready to conduct and it is forced to conduct, conduction by it is ___(2)____.

(1) annoyed  (2) annoying

323. The law of readiness can be concluded as follows:
(a) When a conduction unit is ready to conduct, conduction by it is ___(1)____ but not conduction by it is ___(2)____.

(b) When conduction unit is unready to conduct and it is forced to conduct, conduction by it is ___(3)____.

(1) satisfying  (2) annoying  (3) annoying
324. The law of readiness states that:
(a) When a conduction unit is ready to conduct, conduction by it is satisfying, but not conduction by it is annoying.
(b) When a conduction unit is unready to conduct and it is forced to conduct, conduction by it is annoying.

The above statement is the law of __________.

325. The law of readiness can be explained that when a person feels ready to learn he will learn more effectively and with greater satisfaction than when he is not ______

326. The most fundamental task of the teacher is to develop in children a ____________ to learn.

327. Miremol could learn mathematics because she had a WILL to learn and had INTEREST in mathematics. From this example it can be said that learning is a matter of interest and a will to learn. The learner will be able to learn only when he has i____(1)_____ in the subject or if he has a w____(2)_____ to learn.

(1) interest  (2) will
328. Someizi listened to a certain song for more than ten times, but she did not learn it because she listened to it without interest.

329. If pupils are ready to act, then acting gives satisfaction, but not acting gives annoyance.

The boy who is eager to show his knowledge will be (1) if he is allowed to do so and will be (2) if the teacher ignores him.

(1) satisfied (2) annoyed

330. The function of a teacher is to prepare or to make the pupils ready to learn. Then he allows them to act which will make them satisfied.

Write the correct sequence which the teacher should follow respectively.

(a) pupils are made satisfied.
(b) pupils are prepared or made ready to learn.
(c) pupils are allowed to act.

1st = b 2nd = e 3rd = a.
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331. If the teacher uses the law of readiness which means that learning is possible if the pupils are made (1) ready to learn and then they (2) are (are/are not) to do learning activity.

Here learning will be _______ (more/less) effective.

(1) ready (2) are (3) more

Exercise 6.1:
A. Please fill in the blank with a word or words.
1. The person who has formulated the law of learning is ______._

Thorndike

2. The major laws of learning are of (1) _______ in number, viz., (2) _______.

(1) three (2) the laws of readiness, exercise and effect.

3. Wibha wants to express her knowledge before the class. According to the law of readiness this situation indicates that Wibha is (1) _______ to express her knowledge, and if she has a chance to do so she will feel _______.

(1) ready (2) satisfied
4. Pornchai is not ready to read English but the teacher tells him to read it to the class loudly. According to the law of readiness, Pornchai will feel __________

- - - - - - - - - - - -

annoyed

- - - - - - - - - - - -

5. According to the law of readiness, if Nikhon wants to ride a bicycle but his mother does not allow him to do so, Nikhon will feel __________

- - - - - - - - - - - -

annoyed

- - - - - - - - - - - -

6. According to the law of readiness, the learner will learn effectively if he is (1) to learn because he will learn it with (2) (satisfaction/annoyance).

- - - - - - - - - - - -

(1) ready (2) satisfaction

B. According to the law of readiness:
   (i) When is the learner satisfied?
   (ii) When is the learner annoyed?

- - - - - - - - - - - -

(i) When a conduction unit is ready to conduct, conduction by it is satisfying.

(ii) When a conduction unit is ready to conduct, not to conduct, not to conduct is annoying.
   - When a conduction unit is unready to conduct and it is forced to conduct, conduction by it is annoying.
C. State briefly the law of readiness and give an example.

The laws of readiness state:
- When a conduction unit is ready to conduct, conduction by it is satisfying, e.g., if a pupil is ready to present report to the class and he has a chance to do so he will be satisfied.

- When a conduction unit is ready to conduct, not to conduct is annoying. For example, if the pupil is ready to answer the teacher's question but he has no chance to do it even he tries to raise his hand again and again he will be annoyed.

- When a conduction unit is unready to conduct but it forced to conduct, conduction by it is annoying. For example, if a student is not ready to read a book but forced to read it he will be annoyed.
2. **The Law of Exercise**

332. **The Law of Learning**

The second law of learning is the law of __________.

exercise

333. The law of exercise = the law of use and discuss.

The law of exercise may be called the law of u____(1)____ and d____(2)____.

(1) use  (2) discuss

334. Practice makes a man perfect. This statement refers to the law of exercise or the law of ____1____ and ____2____.

(1) use  (2) discuss

335. Practice makes a man perfect. This statement refers to the law of ____1____ or the law of ____2____ and ____3____. Practice means doing one thing for ____4____ (a few/many) times.

(1) exercise  (2) use  (3) disuse  (4) many
336. Jane is learning poetry by heart. Therefore she recites it again and again. Here Jane is using the law of (1) __ or the law of (2) __ and (3) __.

(1) exercise  (2) use  (3) disuse

337.

Stimulus

Response

The law of exercise states that other things being equal, the more frequently a modifiable connection between (1) __ and (2) __ is made, the (3) __ (stronger/weaker) that connection will be.

(1) stimulus  (2) response  (3) stronger

338. By repetition of the learning tool, the stimulus - response bond is ________ (strengthened/weakened).

strengthened

339. When a modifiable connection is made between the stimulus and response, that connection's strength is, other things being equal, ________ (increased/decreased).

increased
The law of exercise or the law of use or disuse also states that other things being equal, when a modifiable connection between stimulus and response is not made over a period of time, the strength of that connection is weakened.

The above statement is stated by the law of \((1)\) or \((2)\) and \((3)\).

\[(1)\] exercise (2) use (3) disuse.

Since the law of 'exercise' and the law of 'use and disuse' are the same thing, there is no difference in meaning. So in the next frames we will use the term the law of 'use and disuse'. Sometimes the term 'use' and 'disuse' are used separately if specific meaning is needed.

341. Miramol stopped the practice of reciting poetry over many months and, therefore, she forgot it. This is the example of the law of \[(\text{disuse})\] (use/disuse).

\[\text{disuse}\]

342. According to the law of disuse, when an individual stops practising the task, he will \[(\text{forget/remember})\] it.

\[\text{forget}\]
343. When an individual use or exercise the same task frequently, he does not **(1) use** it. But if he disuses or stops exercising the task over a period of time, he will **(2) disuse** the task.

The above examples refer to the law of **(1) forget**, or the law of **(2) forget** and **(3) disuse**.

(1) forget  (2) forget  (3) exercise  (4) use  (5) disuse

344. The law of exercise or the law of use and disuse states that, other things being equal, when a modifiable connection between a stimulus and a **(1) response** is made over a period of time, the strength of that connection is **(2) strengthened/weakened**.

(1) response  (2) strengthened

345. Hitaya reads her lesson a number of times in order to learn it thoroughly. Here she is using the law of **use**.

When we read the lessons a number of times in order to learn it thoroughly, we are using the law of **use**.

346. In learning, it can be said according to the law of **use**, that the more we read the same thing, the more we **(1) use**.
According to the law of disuse, it can be said that the less we read, the more we (2) (learn/forget) it.

(1) learn (2) forget

347. The exercises provided at the end of each unit is based on the law of use or exercise. So drill or exercise is ( ) based on the law of ____________.

use (or exercise)

348. In drill work, there is a repetition of the learning task. Therefore, the drill work (1) (strengthens/weakens) the facts to be learnt.

When there is a lack of practice, the learnt facts/skills are (2) (strengthened/weakened).

(1) strengthened (2) weakened

349. Drill work or more practice of the task is (1) the connection between the stimulus and response.

When there is a lack of practice, the connection between the stimulus and response is (2) ____________.

(1) strengthens (2) weakened
350. Drill work or practice a (1) the connection between the stimulus and response but drill work or practice without INTEREST will not a (2) that connection between the (3) and (4).

(1) strengthens (2) strengthen
(3) stimulus (4) response

351. You are learning about practising the task with interest and without interest.

Somor practices the task with interest. Do you think that he will learn the task?
Ans. (1)

Sam practices the task without interest. Do you think that he will learn the task?
Ans. (2)

(1) Yes (2) No

352. Manoj is learning to solve the cube game (to put the same colour on one side of the cube) with interest. So with a long practice he is able to learn to do it. From this it can be said that in learning practice or exercise should be accompanied by _________.

interest
353. The law of use or exercise works effectively only when the learner \((1)\) (has/has no) interest in his learning task.

**Efficient learning is possible only when an individual uses the law of \((2)\) or \((3)\) with \((4)\)**

\((1)\) has \((2)\) use (or exercise)  
\((3)\) exercise (or use) \((4)\) interest

354. About learning, from the previous frames we can say that repetition alone will not be quite sufficient to guarantee efficient \((1)\). Repetition must be accompanied with \((2)\).

\((1)\) learning \((2)\) interest

355. For efficient learning, is practice without interest necessary?

**Ans. \((1)\)**

For efficient learning, is practice with interest necessary?

**Ans. \((2)\)**

\((1)\) No \((2)\) Yes
356. You have learnt that for efficient learning, practice of
the task must accompany interest. Over and above, practice
of the task must accompany the PURPOSE for doing it.

Manoj is practising to solve the cube game because
he wants to show it to his school-mates when the function
is organized at school. So his purpose or goal is to

(1) show it to his school-mates
(2) purpose

357. Efficient learning — Repetition of the learning task
+ Interest in that task + Purpose for doing that task.

Efficient learning will take place only when the task
is repeatedly practised with (1) and when he is
clear in his (2).

(1) interest  (2) purpose (or goal)

358. Rekha learnt to play upon the piano efficiently because
she pr (1) playing it with (2) and (3).

(1) practised  (2) interest  (3) purpose (goal)

359. Efficient learning is possible only when the learning task
is (1) with (2) and (3).

(1) practised  (2) interest  (3) purpose (or goal)
360. Efficient learning is possible if the connection between the STIMULUS and the RESPONSE is strengthened. And the connection between the stimulus and response will be strengthened when the task is (1) practised again and again with (2) interest and (3) purpose (or goal).

(1) practised (2) interest (3) purpose (or goal)

361. Drill or reviewing with interest and purpose strengthens the connection between the (2) stimulus and (3) response.

(1) strengthens (2) stimulus (3) response

362. Drill work or reviewing work is necessary if the law of exercise (readiness/exercise) is to be used in the class.

exercise

363. You have learnt about the law of exercise. Very good! Now you will be introduced the third law of learning which is the last one.
Exercise 6.2:

A. Fill in the blank with word or words.

1. The law of exercise may also be called the law of (1) __________ and (2) __________.

   (1) use  (2) disuse

2. The law of exercise refers to the strengthening of connection with practice and to the weakening or forgetting when the practice _________ (is/is not) continued.

   is not

3. The law of exercise states that other things being equal, the more frequently a modifiable connection between the stimulus and response is made the _________ (stronger/weaker) that connection will be.

   stronger

4. Other things being equal, when a modifiable connection between stimulus and response is not made over a period of time, the strength of that connection is _________.

   weakened
5. When a modifiable connection is made between a (1) and a (2) the strength of that connection is, other thing being equal, (3) (decreased/increased).

(1) stimulus (2) response (3) increased

6. Other things being equal, exercise (1) (strengthens/weakens) and a lack of exercise (2) the bond between stimulus and response.

(1) strengthens (2) weakens

7. Repetition (1) (fixes/rubs out) the fact to be learnt; when there is lack of practice, the memory of learnt material (2).

(1) fixes (2) weakens

8. While learning, repetition alone is not sufficient to promote efficient learning. Repetition has great value when it is accompanied by interest (2) for doing that task.

(1) interest (2) purpose (or goal)

3. State briefly the law of exercise in your own words.

(You may answer as following)

The law of 'exercise' may be called the law of 'use and disuse' which states that practice strengthens the connection between stimulus and response which will make an organism to do the task will. But the lack of practice the bond between stimulus and response will be weakened and the organism won't be able to do the task properly or forgetting will take place.
363. The Laws of Learning

1. Law of Readiness
2. Law of Exercise
3. Law of Effect

The third law of learning is the law of  

Effect

364. Following are the list of words said by the teacher which are considered to be the stimuli and the students' responses of which some are right while some are wrong. After the student has answered the teacher will say "right" or "wrong" as the case may be.

Please write 'r' where the teacher will say 'right' and 'w' where the teacher will say 'wrong' under the column 'result'.

<table>
<thead>
<tr>
<th>Teacher's Statement (Stimuli)</th>
<th>Pupil's answer (Response)</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Two multiplied by six</td>
<td>Twelve</td>
<td></td>
</tr>
<tr>
<td>2. Four multiplied by five</td>
<td>Twenty</td>
<td></td>
</tr>
<tr>
<td>3. Add eight to nine</td>
<td>Eighteen</td>
<td></td>
</tr>
<tr>
<td>4. Square root of ten</td>
<td>Three</td>
<td></td>
</tr>
</tbody>
</table>

1. = r  2. = r  3. = w  4. = w
When the learner knows that his answer (response) is right, he is satisfied; but when he knows that his answer (response) is wrong he is annoyed.

From the following list, write 'S' when the learner is satisfied and 'A' when the learner is annoyed under the column "student's feeling" (or Effect).

<table>
<thead>
<tr>
<th>Teacher's instruction</th>
<th>Pupil's answers</th>
<th>Teacher's comments</th>
<th>Pupil's feeling</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Stimuli)</td>
<td>(Responses)</td>
<td>(Result)</td>
<td>(Effect)</td>
</tr>
<tr>
<td>1. Two multiplied by six</td>
<td>Twelve</td>
<td>Right</td>
<td></td>
</tr>
<tr>
<td>2. Four multiplied by five</td>
<td>Twenty</td>
<td>Right</td>
<td></td>
</tr>
<tr>
<td>3. Add eight to nine</td>
<td>Eighteen</td>
<td>Wrong</td>
<td></td>
</tr>
<tr>
<td>4. Square root of ten</td>
<td>Three</td>
<td>Wrong</td>
<td></td>
</tr>
</tbody>
</table>


1. $= s$  2. $= s$  3. $= a$  4. $= a$

When the teacher approves the pupil's answer, the pupil is (1) (satisfied/annoyed). When the teacher says that the pupil's answer is wrong or he ignores the pupil's right answer, the pupil will be (2).

(1) satisfied  (2) annoyed

What is the effect of knowing that the response is right? The effect of knowing that the response is right is (1).

What is the effect of knowing that the response is wrong? The effect of knowing that the response is wrong is (2).

(1) satisfaction  (2) annoyance
368. The pupil in the classroom is satisfied. What can be the reason?

The reason can be the effect of knowing that his response is ___(1)___ (right/wrong).

The pupil in the classroom is annoyed. What can be the reason?

The reason can be the effect of knowing that his response is ___(2)___.

(1) right (2) wrong

369. Satisfaction in the classroom can be the effect of knowing that the response is ___(1)___.

Annoyance in the classroom can be the effect of ___(2)___ that the response is ___(3)___.

(1) right (2) knowing (3) wrong

370. You know that opposite of 'repetition' is 'elimination' and opposite of 'satisfaction' is 'annoyance.'

When a pleasant or satisfying consequence follows a response, the latter tends to be repeated. The effect of satisfaction that follows a correct response is the ___(repetition/elimination) of the response.

repetition
371. When a painful or annoying consequence follows a response, the latter tends to be eliminated. The effect of annoyance that follows a wrong response to the (repetition/elimination) of that response.

---

elimination

---

372. A pupil is asked by his teacher to show Thailand in the map of the world. He shows Thailand. The teacher says "You are right."

Will his response be repeated or eliminated?

Ans. His response will be (1) ______ because he is (2) ______.

---

(1) repeated (2) satisfied

---

373. Another pupil is asked by his teacher to show Bangkok in the map of Thailand, but the pupil shows Rayong. The teacher says, "You are wrong."

Will his response be repeated or eliminated?

Ans. His response will be (1) ______ because he is (2) ______.

---

(1) eliminated (2) annoyed
374. While learning, the effect of knowing that the response is right, the learner is ___(1)___ (satisfied/annoyed). The effect of satisfaction is the ___(2)___ (repetition/elimination) of the response.

But the effect of knowing that his response is wrong, the learner is ___(3)____. The effect of annoyance is the ___(4)___ of the wrong response.

______

(1) satisfied (2) repetition (3) annoyed (4) elimination

375. Naru is learning to dance. Her teacher says, "Your steps are right."

Naru is ___(1)___ (satisfied/annoyed). Therefore she ___(2)___ (repeats/eliminated) the steps.

______

(1) satisfied (2) repeats

376. Watana is learning to solve a problem in algebra. His teacher says, "You are wrong."

Watana is ___(1)___ (satisfied/annoyed). Therefore he ___(2)___ the wrong steps. As a result the connection between stimulus and response is ___(3)___.

______

(1) annoyed (2) eliminates (3) weakened
377. Effect of repetition of the response strengthens the connection between stimulus and response.

The pupil repeats his response because the teacher says that it is right. Therefore he learns the answer to the question. This is the effect of ________ (repetition/elimination) of the response.

---

378. Effect of elimination of the response weakens the connection between stimulus and response.

The teacher asks his pupil a question but the pupil gives wrong answer. Therefore that pupil eliminates his wrong answer (response). So he does not learn the wrong answer to the question. This is the effect of ________ of the response.

---

379.

In the figure A the connection between a _______ (1) ______ and a _______ (2) ______ seems to be _______ (3) ______ (strengthened/ weakened).
In figure B the connection between a (4) stimulus and a (5) response seems to be (6) strengthened or weakened.

(1) stimulus (2) response (3) strengthened
(4) stimulus (5) response (6) weakened

380. In figure A, the response must have been repeated. This shows that learning (1) has/has not taken place.

Does figure B represent the strengthening or weakening of the connection between a stimulus (situation) and a response?

Ans. (2)

(1) has (2) weakening

381. The effect of repetition of the response (1) strengthens the connection between a stimulus and a response.

The effect of elimination of the wrong response (2) weakens the connection between stimulus and response.

(1) strengthens (2) weakens

382. When the connection between the stimulus and response is STRENGTHENED we can say that learning (1) has/has not taken place.

has
334. Following are the examples of stimulus - response. Write 's' if the connection between them will be strengthened and 'w' when the connection between them will be weakened by writing them in column 'connection' (S - R bond).

<table>
<thead>
<tr>
<th>Teacher's words</th>
<th>Pupil's answer</th>
<th>Teacher's comment</th>
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</tr>
<tr>
<td>4. Square root of ten</td>
<td>Five</td>
<td>Wrong</td>
</tr>
</tbody>
</table>

(1) s  (2) = s  (3) w  (4) = w

335. Responses are fixed when there is satisfaction and destroyed when there is annoyance. This is according to the law of satisfaction or the law of satisfaction.

336. The law of effect may be called as the law of satisfaction. According to the law of satisfaction, responses are fixed when there is satisfaction and are destroyed when there is annoyance.

(1) satisfaction  (2) satisfaction  (3) annoyance
387. According to the (1) law of the effect or the (2) law of satisfaction, responses are fixed when there is (3) satisfaction (satisfaction/annoyance) and the responses are destroyed when there is (4) annoyance.

(1) law (2) law (3) satisfaction (4) annoyance

388. The law of effect is also called the law of satisfaction because when there is a feeling of satisfaction the response is (1) fixed (fixed/destroyed). When there is a feeling of annoyance the response is (2) destroyed.

(1) fixed (2) destroyed

389. According to the law of effect, there is a feeling of satisfaction because the learner knows that his response is (1) right (right/wrong).

right

390. When the response is right it is repeated. Sudha's response was right, therefore, she (1) repeated it. This is according to the law of (2) effect or the law of satisfaction.

(1) repeated (2) effect
391. When the response is right and when it is (1) the connection between a stimulus and a (2) is strengthened. This is the law of effect or the law of (3).

(1) repeated (2) response (3) satisfaction

392. The response is fixed only when the connection between a (1) and (2) is strengthened.

(1) stimulus (2) response

393. The response is (1) (fixed/destroyed) only when the (2) between a stimulus and a response is (3). This is called the law of (4) or the law of (5).

(1) fixed (2) connection (3) strengthened (4) effect (5) satisfaction

394. The law of effect is also known as the law of (1).

The law of effect = the law of (2)

(1) satisfaction (2) satisfaction
395. The law of effect in Thorndike's own word is: When a modifiable connection between a situation and response is made and is accompanied or followed by a satisfying state of affairs, that connection's strength is increased; when made or accompanied or followed by an annoying state of affairs its strength is decreased.

This is the law of _______ formulated by _______.

(1) effect (2) Thorndike

396. When is the connection's strength between stimulus and response increased?

Ans. When the response is accompanied or followed by (1) _______ (satisfying state of affairs/annoying state of affairs).

When is the connection's strength between stimulus and response decreased?

Ans. When the response is accompanied or followed by (2) _______.

(1) a satisfying state of affairs
(2) an annoying state of affairs

397. When a modifiable connection between a stimulus and a response is made and accompanied or followed by a satisfying state of affairs, the connection's strength is (1) _______.

When a modifiable connection between stimulus and response is made and accompanied or followed by an annoying state of affairs, the connection's strength is (2) _______.

(1) increased (2) decreased
When the learner knows that his response is right, the connection between stimulus and response is (1) strengthened/weakened.

When the learner knows that his response is wrong, the connection between a stimulus and a response is (2) strengthened/weakened.

(1) strengthened (2) weakened

The teacher asked a question to his pupil. The pupil's answer was right and he was satisfied. Therefore, the connection between a question (stimulus) and an answer (response) is strengthened.

Learning will occur when the learner is satisfied. This is possible because there is the connection between a (1) and (2).

Learning will not occur if the connection between a (3) and a (4) is (5).

(1) stimulus (2) response (3) stimulus (4) response (5) weak
Exercise: 6.3:

A. Please fill in the blanks with word or words according to the 'law of effect.'

1. The law of effect may be called the law of ________

------------

satisfaction

2. When an individual knows that his response is right he is ________ (satisfied/annoyed).

------------

satisfied

3. If pleasant or satisfying consequence follows the response that response will be ________ (repeated/eliminated).

------------

repeated

4. When an individual knows that his response is wrong he will be ________.

------------

annoyed

5. When the annoying consequences attend a response that response will be ________ (repeated/eliminated).

------------

eliminated

6. An individual will repeat his response: if that response is ________ (right/wrong) and he feels ________

------------

(1) wrong  (2) annoyed
7. An individual will eliminate a response if that response is (1) __ (wrong/right) and he feels (2) __.

(1) wrong (2) annoyed

8. Satisfaction ___________ (strengthens/weakens) the connection between a stimulus and a response.

9. Annoyance ___________ the connection between a stimulus and a response.

(1) strengthens (2) weakens

10. Repetition of the response strengthens the connection between a (1) _______ and a (2) _______.

(1) stimulus (2) response

11. Elimination of response will ___________ (strengthens/weakens) the connection between a stimulus and a response.

(1) strengthens (2) weakens

12. Learning will take place when the learner feels (1) _______ or the connection between a stimulus and a response is (2) _______. But learning will not take place if the learner feels (3) _______ or the connection between a stimulus and a response is (4) _______.

(1) satisfied (2) strengthened (3) annoyed (4) weakened
B. Explain the law of effect briefly.

(You may answer as the following).

The law of effect may be called as law of satisfaction. The law of effect states that when a modifiable connection between a stimulus and a response is made and accompanied by a satisfying state of affairs, the connection's strength is increased. But if accompanied by annoying state of affairs, the connection's strength is decreased. For example, if the student gives the right response to the teacher's problem, the student will be satisfied and the connection's strength between a stimulus and a response will be increased and learning will take place. Then he will repeat the same responses in the similar situation (or stimulus). On the other hand, if his response is incorrect that response will be eliminated which will weaken the connection's strength between stimulus and response.