COMMENT-1: The title in the front cover, first page and certificate are different. A consistent title needs to be followed everywhere. This clearly shows that enough care was not taken while typing. The date column in certificate, declaration and acknowledgement is left empty. This should have been filled prior to submission. The name of the university is missing in the first page.

RESPONSE-1: These errors and carelessness are regretted. The title ‘Effect of cyclic meditation on sleep architecture and subjective sleep rating’ has been given in the cover page, declaration as well as certificate of the revised thesis. The date is mentioned in the certificate, declaration and in the acknowledgement. The name of the University is also mentioned on the first page of the revised thesis.

COMMENT-2: The EEG, EMG, EOG and ECG tracings given in Chap. 2 Literary Research’ looks like reproduced from a book. If so they should be reproduced with permission and the name of the book and reference should be mentioned in the legend. I am not sure what Literary research is- is it literature search or review of literature? I do not think that we can put a literature search on the thesis-one has to search literature and then review it.

RESPONSE-2: It is mandatory for all students of Swami Vivekananda Yoga University (a Deemed University) to write a separate section on the concepts available in the ancient scriptures and spiritual lore related to the topics of the experimental research. This is called Literary Research. This is different from the review of scientific literature which is presented as chapter 2.0 and appears between pages 54 and 86.
With reference to EEG, EMG and EOG tracings, the tracings are taken from a recording which was part of the candidate’s polysomnography data. We have used actual tracings from records all through the chapter 2.0 and are used in pages 12, 13, 26, 33, 34, 35, 36, 38, 39, 40, 41, 42, 43, 44 and 45.

**COMMENT-3:** In review of scientific literature, Pages 106 to 118, gives a table which summarises the different studies. (This table lacks a table number also). For some of the studies (Fenwick et al., Warrenburg et al., Corby et al.) the sample size column is left blank. This raises the suspicion whether full text of all these articles was read. A study should be quoted only if the candidate has read the full text of the article. In most of the studies under the column ‘Experimental Design’, the actual study design is not mentioned, but only the intervention is mentioned. The study design needs to be mentioned for all the studies. In the same table for some of the studies, sample size is given as one (n = 1). One such example is Telles & Desiraju (1992). On checking the abstract of this study, it was found to have a sample size of 18!

**RESPONSE-3:** The table numbers have been given for each table in this chapter. In the revised thesis, the sample size of the studies (Fenwick et al. and Werrenburg et al.) have been mentioned between pages 88 and 89. This mistake is also regretted. The omission in providing an experimental design is regretted. In the revised thesis, the experimental design for all studies have been mentioned in the Table 3.4.1.

Two studies of Telles and Desiraju are mentioned in the table as well as in the review. These are two different studies one with the single subject (1992) and the other with 18 meditators (1993). This is clearly mentioned in the revised thesis (ref: Table 3.4.11 & 3.4.7, page numbers between 97 and 100; text page number 75.)
**COMMENT-4:** Some studies which are cited in review of literature are not listed in the references. One such example is Arambula et al (Page 116). The candidate is advised to check all the in text citation and reference list. These kind of ghost references are not acceptable.

**RESPONSE-4:** The omission is regretted. In the revised thesis, all text citations were thoroughly checked with the reference list. The citation ‘Arambula, et al.’ has been added in the reference list.

**COMMENT-5:** It is mentioned in Page 124 that the sample size calculation was done for $\alpha = 0.05$ and power $(\beta) = 0.95$ is type II error and it is not the same as power. Power is $1 - \beta$. The minimum expected difference and S.D used for calculating the sample size should also be mentioned, so that the reader can replicate your calculation.

**RESPONSE-5:** This was a serious error which is regretted. I have checked the details, and understood the meaning of $\alpha$, $\beta$ and effect size. The sample size calculation was re-done with $\alpha = 0.05$, power = 0.95 and Cohen’s effect size = 0.7. This has been incorporated in the revised thesis in page number 105.

**COMMENT-6:** Fig 5.1.5.A in Page 128, gives the study design as a parallel arm study. But the explanation in Page 129, describes it as though it is a crossover study (same subject undergoing cyclic meditation and supine rest that are three days apart). It is also mentioned that the order of the sessions was randomized. This means it is a cross over design. The study design and the procedure should be clearly written. It is not clear how many subjects completed the study. Why did some drop out? Reason should be given.
RESPONSE-6: The design of the present study was a ‘self as control design’. We used this phrase to mean that the same subjects were assessed in both cyclic meditation (CM) and supine rest (SR) sessions on different days. Whether a subject practiced CM or SR on the first or on the next day was determined using randomization (i.e., a random number table). The trial profile and the explanation given for the ‘study design’ have been modified to give a clear idea about the study design. Also the reason has been specified for the subjects dropping out. The trial profile has been modified (Page number 109) while the reasons for drop outs have been mentioned on Page number 110.

COMMENT -7: In this study, the subjects of both groups are experienced in cyclic meditation. To achieve the objectives of this thesis i.e., to compare the effects of cyclic meditation and supine rest on sleep, one should have been chosen subjects who do not know cyclic meditation (for the supine rest group); and those who know cyclic meditation for the “Cyclic meditation” group OR subjects who do not know cyclic meditation should be recruited and randomized into two groups, in which one group should be trained in cyclic meditation and the other in supine rest.

Moreover, in this study, the subjects have performed cyclic meditation/supine rest for only one day during the study. It does not seem very logical that a significant response can be got within this duration.

RESPONSE-7: Participants had prior experience of both cyclic meditation and supine rest (shavasana) as part of their yoga practice. In addition, an orientation for one month training was given to all subjects to be regular with the practice. This was followed by a month during which they did no yoga practice (including cyclic meditation and supine rest). This was considered a period of detraining. On the day of recording, subjects were
asked to practice ‘CM’ twice a day i.e., at 9 a.m. and at 6.45 p.m. The same was done for SR.

Not including naive subjects was one of the limitations of the study which appears in the discussion as a limitation of the study.

**COMMENT-8:** If the volunteers are yoga students there is bound to be some effect of the yoga on their sleep. This means that the results which are got are the effects of yoga on sleep in addition to the cyclic meditation or supine rest

**RESPONSE-8:** In an attempt to reduce this effect there was a one month period during which practitioners did not practice yoga (including CM and SR) and also did no other particular physical activity. This was a detraining period and could not be prolonged for more than a month. The possibility that yoga practice may have continued to influence the subjects in spite of the one month ‘detraining’ cannot be ruled out. This has also been mentioned in the discussion as a limitation of the study.

**COMMENT-9:** 5.2.2A and B (Page 131 & 132) the title is not clear

**RESPONSE-9:** The title of the tables have been modified and incorporated in the thesis.

**COMMENT-10:** Page 141-last paragraph-not clear. Page 158-looks to have been downloaded from the internet-no reference is given in the legend.

**RESPONSE-10:** The last Para of the page 141 is now 121 in the revised thesis. This is rewritten to bring in more clarity.

The mistake of downloading the pictures and not providing the reference is deeply regretted (the pictures mentioned in Page 158, are now presented as a plate in the Page number 136). Two parts of this plate were downloaded from the internet to give a clear understanding about the data extraction whereas the third part of the picture was included
from the candidate’s own HRV analysis data. Reference has been given for each part of the picture.

**COMMENT-11:** In the methods section, Page 134 gives a photograph of a person undergoing Polysomnography. This photograph looks as it has been downloaded from the internet. In the methods and results section, photographs and tracings from your own study only should be represented. If a photograph of a subject is included, his/her identity should be masked and written permission taken.

**RESPONSE-11:** The mistake of downloading a photograph of a subject is regretted. A photograph of a subject has been included and his identification is masked in the revised thesis in Plate 5.3.1.A and Page number 115. Also a written permission for the same was obtained from the subject whereas the picture of the machine was the machine of our own Polysomnography laboratory.

**COMMENT-12:** The n should be mentioned in all tables

**RESPONSE-12:** The sample size (n) has been mentioned in all tables in the thesis.

**COMMENT-13:** The p value given in Tables 7.1.1, 7.2.1 and 7.3.1 are not reproducible when statistical analysis was performed with the given data. So the candidate is advised to redo the analysis correctly.

**RESPONSE-13:** The analysis was done using SPSS-10.0 and the level of significance can now be reproduced. The result section was modified accordingly. The tables were modified to bring a better clarity.

**COMMENT-14:** References are not in a uniform style and there are some duplication. For example Mason et al is repeated twice. Some references cited in the text are not listed in the references. (e.g. Arambula et al). So references needs to be made consistent.
RESPONSE-14: The reference section has been thoroughly checked and a uniform style has been followed. The references which were repeated have been deleted and all the citations referred in the text are ensured to be in the reference list.

COMMENT-15: The informed consent from given in Appendix 1 is incomplete as it does not give the complete details of the study. Informed consent in local language should also be included in the appendix.

RESPONSE-15: A complete informed consent form is included between Pages number 202 and 204 in the revised thesis and the informed consent in the local vernacular language i.e., Kannada was not given in the thesis as all the subjects were English literate.

COMMENT-16: All abbreviations when used for the first time in the text should be expanded.

RESPONSE-16: The whole thesis was thoroughly checked and the abbreviations are expanded when they were used for the first time in the revised thesis.

COMMENT-17: General remarks:

It is better to get the language checked by someone since some sentences are incomplete and do not make much sense.

I cannot read Hindi and hence I have not read those parts of the thesis.

The thesis must be re-written. I would suggest including individuals who have not had any yoga training to be included – or else the objectives and conclusions may need to be modified.
RESPONSE-17:

The revised thesis is reviewed and corrected by a Professional reader, who is a visiting faculty at the University.
COMMENT-1:

Only one sentence is written under ‘Background in abstract. The justification for the study should be written precisely in the section.

RESPONSE-1:

Cyclic meditation is a relatively easy to learn technique which influences the heart rate variability, with specific changes associated with the levels of mental stress and cyclic meditation appears to help in stress reduction and stress reduction techniques have been found useful in improving the sleep quality.

COMMENT-2:

The abstract is placed before the contents. It should be the other way.

RESPONSE-2:

According to the norms of the University, a candidate is supposed to write ‘Abstract’ before the content pages.

COMMENT-3:

In contents, ‘Deep sleep’ is wrongly mentioned as ‘Depp sleep’ and ‘calibrating’ as ‘callibrating’.

RESPONSE-3:

The errors in the content pages are regretted.

COMMENT-4:

Page no.4, last line quotes the reference ‘Sarang & Telles, 2006’. Actually there are three references by the same author in 2006 (marked as 2006a, 2006b and 2006c) in the references section. It should be mentioned which among these is quoted.

RESPONSES:

Quoting the reference ‘Sarang & Telles, 2006’ in page number 4, last line was a mistake. Currently this reads as ‘Sarang & Telles, 2006c’.

COMMENT-5:

Pages 87 to 102, Tables 3.4.1 to 3.4.14, provide a summary of information on studies involving various types of meditation (Transcendental, yoga, zen, etc). It is prudent to mention the duration
for which the subject practiced the meditation. The table would have been made more informative by providing the number of meditations and controls in each study (wherever applicable) rather than the total sample size.

RESPONSE-5:

All the tables between Pages 87 and 112 have been made informative by providing the number of subjects in both experimental and control groups.

COMMENT-6:

The text in page 105, mentions the sample size as 30 and the number of subjects did not vary across the variables studied. But the table in the same page mentions the sample size as 40 for the variable ‘Autonomic, respiratory & heart rate variability’. In page 106, Table 5.1.2 provides the baseline characteristics of 40 subjects. In page 109, Figure 5.2 illustrates the flow of participants and mentions that 50 subjects are randomized. The discrepancy in sample size should be explained.

RESPONSE-6:

Mentioning the sentence ‘the number of subjects did not vary across the variables studied’ was a mistake. Currently this mistake has been rectified in all the tables.

COMMENT-7:

Figure 5.2 mentions that 50 subjects are randomized. But the method of randomization is not mentioned anywhere. This needs to be explained.

RESPONSE-7:

The method of randomization was included in trial profile in Figure 5.2.

COMMENT-8:

Most of the figures (bar diagrams) in the results section do not have either the legend or units for the variables in y axis.

RESPONSE-8:

Mistakes of not writing either the legend or units in y axis were regretted.

COMMENT-9:

Figures 7.1.8, 7.1.9, 7.1.11, 7.2.1 to 7.2.5, 7.3.3 to 7.3.8 indicate an asterisk (*) symbol. But the explanation for it is not provided in the foot note of the respective figures.

RESPONSE-9:

Explanation for all the asterisks are given in foot notes for in all the respective figures.