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NORTHWEST ACCREDITATION COMMISSION, USA GRADE 10TH 2017-2018

Subject- SCIENCE (PRACTICAL)

Question Paper No. :

S	C	2	1
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Subject Code : PSC1005

Question Paper Code:

S	P	7	3
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Total Time: 1:30 Hours.

Total Marks: 30

GENERAL INSTRUCTIONS

1. OPENING AND CHECKING OF THE QUESTION-BOOKLET

Break open the seal of the Question-Booklet only when the announcement is made by the Invigilator. After breaking the seal and before attempting the questions, student should immediately check for:

- a) The number of the printed page in the Question-Booklet is the same as mentioned on the cover page of the Booklet and
- b) Any printing error in the Booklet pages, if any.
Any discrepancy or error should be brought to the notice of the Invigilator who will then replace the Booklet. No additional time will be given for this.

2. No student, without the permission of the Superintendent or the Invigilator concerned, is to leave his/ her seat or the Examination Room.

3. FILLING UP THE REQUIRED INFORMATION ON QUESTION-BOOKLET AND ANSWER SHEET

After breaking open the seal and checking the Booklet, student should:

- a) Fill up the **Question Paper No.** and **Question Paper Code** (mentioned on the cover of Question-Booklet) in the space provided on the First Answer Sheet.
- b) Fill up his/her Roll Number on the First Answer Sheet and on each Supplementary Answer Sheet, if taken.
- c) Student should mention the total number of **Supplementary Answer Sheet**, if taken, in the space provided on the First Answer Sheet and also fill up the Serial Number mentioned on each **Supplementary Answer Sheet** along with his/her Roll Number in the register maintained by the Invigilator. Student must tie all the Answer Sheets with the thread provided by the Invigilator.

4. INSTRUCTIONS ABOUT QUESTION PAPER

- a) This Question Paper includes five questions. All questions are compulsory.
- b) All questions are carrying six marks each in approximately 80-100 words.

5. Student found in possession of Cellular Phone / Mobile Phone / Pager or any other Communication Device and/or any Book/Note whether using or not, will be liable to be debarred for taking examination(s) either permanently or for specified period or/and dealt with as per law or/and ordinance of the School/SERI according to the nature of offence, or/and he/she may be proceeded against and shall be liable for prosecution under the relevant provision of the Statutory Law.

THE ANSWER SHEET IS TO BE RETURNED ON COMPLETION OF THE TEST

This Question Paper MUST be attached with Answer Sheet

Total number of questions: 5	Marks allocated to each question: 6	Total marks: 30
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Question 1. Draw ray diagrams to show the formation of a three times magnified (i) real image (ii) virtual image of an object kept in front of a converging lens. Mark the positions of object, F, 2F, O and position of image clearly in the diagram.

An object of size 5 cm is kept at a distance of 25 cm from the optical centre of a converging lens of focal length 10cm. Calculate the distance of the image from the lens and size of the image.

OR

Suggest reasons for each of the following:

- (a) The sky appears to be blue during day time to a person on earth.
- (b) The sky near the horizon appears to have a reddish hue at the time of sunset and sunrise.
- (c) The sky appears dark instead of blue to an astronaut.
- (d) The stars appear to twinkle.
- (e) The planets do not twinkle.

Question 2. (a) Explain the mechanisms of the cleansing action of soaps.
(b) Detergents are effective in hard water but soaps are not. Why?

OR

Name the main organs of the human digestive system in the order they participate in the process of digestion. Describe how digestion of carbohydrates and proteins take place in our body.

Question 3. (a) Draw the ray diagrams for the image formation by a concave mirror when the object is at
(i) infinity (ii) between F and C (iii) between P and F
(b) Explain why we prefer to use a convex mirror as a rear view mirror in vehicles?
(c) Write any two uses of a concave mirror.

OR

In a household electric circuit different appliances are connected in parallel to one another. Give two reasons.

An electrician puts a fuse of rating 5A in that part of domestic electrical circuit in which an electrical heater of rating 1.5kW, 220V is operating. What is likely to happen in this case and why? What change, if any, needs to be made?

- Question 4.** (a) Write down the difference between direct current and alternating current
- (b) What is the frequency of AC in India?
- (c) What is the advantage of AC over DC
- (d) Name any two safety device used in domestic circuit.

OR

A piece of wire is redrawn, without change in volume so that its radius is halved. Compare the new resistance with the original resistance.

- Question 5.** (a) State the chemical properties on which the following uses of baking soda are
- (i) As an antacid
- (ii) As soda –acid fire extinguisher.
- (iii) To make bread and cake soft and spongy.
- (b) How washing soda is obtained from baking soda? Write balanced chemical equation.

OR

What is meant by electric circuit? What is done in order to have continuous flow of electric charge from a point A to another point B in an electric circuit? Write the relation between coulombs and ampere.

END OF THE QUESTION PAPER

Sample Paper