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LSOFT POSTAL TEST SERIES

EXCLUSIVE BENEFITS FOR STUDENTS

QUESTION PAPER & SOLUTIONS

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POSTAL TEST SERIES

LSOFT TEST SERIES

QUESTION PAPER

Topic : Physical World & Measurement

Booklet Version
11

Write this number on your Answer Sheet

: IMPORTANT INSTRUCTIONS :

LSOFT TEST SERIES

QUESTION PAPER

Topic : Some Basic Concepts of Chemistry & Structure of Atom

Booklet Version
22

Write this number on your Answer Sheet

: IMPORTANT INSTRUCTIONS :

01. Immediately fill in the particulars on this page of the Test Booklet with Blue/Black Ball Point Pen. Use of pencil is strictly prohibited.
02. The Answer Sheet is kept inside this Test Booklet. When you are directed to open the Test Booklet, take out the Answer Sheet and fill in the particulars carefully.
03. The test is of 45 Min. duration.
04. The Test Booklet consists of 45 questions. The maximum marks are 180.
Chemistry (180 marks) – All the Questions consist of FOUR (4) marks each. Candidates will be awarded marks as stated above in the Test Booklet. ¼ (one-fourth) marks will be deducted for indicating incorrect response of each question. No deduction from the total score will be made if no response is indicated for an item in the Answer Sheet. Use Blue/Black Ball Point Pen only for writing particulars/marking responses on Side-1 and Side-2 of the Answer Sheet. Use of pencil is strictly prohibited.
05. Candidate is allowed to carry any textual material, printed or written, bits of papers, pager, mobile phone, any electronic device, etc., except the Admit Card inside the examination room/hall.
06. Rough work is to be done on the space provided for this purpose in the Test Booklet only.
07. On completion of the test, the candidate must hand over the Answer Sheet to the Invigilator in the Room/Hall. However, the candidates are allowed to take away this Test Booklet with them.
08. The CODE for this Booklet is A. Make sure that the CODE printed on Answer Sheet is the same as that on this booklet. In case of discrepancy, the candidate should immediately report for replacement of both the Test Booklet and Answer Sheet.
09. Do not fold or make any stray marks on the Answer Sheet.
10. Each candidate must show on demand his/her Admit Card to the Invigilator.
11. No candidate, without special permission of the Superintendent or Invigilator, should leave his/her seat.
12. The Candidates should not leave the Examination Hall without handing over their Answer Sheet to the Invigilator on duty and sign the Attendance Sheet twice. Cases where a candidate has not signed the Attendance Sheet twice may be deemed not to have handed over the Answer Sheet and dealt with as an unfair means case.
13. Use of Electronic/Manual Calculator is prohibited.

Booklet No.

Name of Examination (in Capital letters)

Candidate's Signature

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QUESTION PAPER

Topic : Diversity in Living World

Booklet Version
33

Write this number on your Answer Sheet

: IMPORTANT INSTRUCTIONS :

01. Immediately fill in the particulars on this page of the Test Booklet with Blue/Black Ball point Pen. Use of pencil is strictly prohibited.
02. The Answer Sheet is kept inside this Test Booklet. When you are directed to open the Test Booklet, take out the Answer Sheet and fill in the particulars carefully.
03. The test is of 90 minutes duration.
04. The Test Booklet consists of 90 questions. The maximum marks are 360.
05. Biology (360 marks) – All the Questions consist of FOUR (4) marks each.
06. Candidates will be awarded marks as stated above in Instruction No.5 for correct response of each question. ¼ (one-fourth) marks will be deducted for indicating incorrect response of each question. No deduction from the total score will be made if no response is indicated for an item in the Answer Sheet.
07. Use Blue/Black Ball Point Pen only for writing particulars/marking responses on Side-1 and Side-2 of the Answer Sheet. Use of pencil is strictly prohibited.
08. No candidate is allowed to carry any textual material, printed or written, bits of papers, pager, mobile phone, any electronic device, etc., except the Admit Card inside the examination room/hall.
09. Rough work is to be done on the space provided for this purpose in the Test Booklet only.
10. On completion of the test, the candidate must hand over the Answer Sheet to the Invigilator in the Room/Hall. However, the candidates are allowed to take away this Test Booklet with them.
11. The CODE for this Booklet is A. Make sure that the CODE printed on Answer Sheet is the same as that on this booklet. In case of discrepancy, the candidate should immediately report for replacement of both the Test Booklet and Answer Sheet.
12. Do not fold or make any stray marks on the Answer Sheet.
13. Each candidate must show on demand his/her Admit Card to the Invigilator.
14. No candidate, without special permission of the Superintendent or Invigilator, should leave his/her seat.
15. The Candidates should not leave the Examination Hall without handing over their Answer Sheet to the Invigilator on duty and sign the Attendance Sheet twice. Cases where a candidate has not signed the Attendance Sheet twice may be deemed not to have handed over the Answer Sheet and dealt with as an unfair means case.
16. Use of Electronic/Manual Calculator is prohibited.

Booklet Number
273301

Write this number on your Answer Sheet

Lsoft Test Series, Pune

HINTS & SOLUTIONS

Topic : Optics

Booklet No.: 271117

1. Ans: (2) Frequency
Sol: Frequency does not change on refraction

2. Ans: (1) it reduces the light intensity to half on account of polarization
Sol: Polaroid glass polarizes light reducing the light intensity to half its original value.

11. Ans: (2) 20 cm
Sol:
Here image can be real or virtual.
If the image is real $f = -30, u = ?, m = -3$
$m = \frac{f}{f-u} \Rightarrow -3 = \frac{-30}{-30-u} \Rightarrow v = -40$ cm.

Lsoft Test Series

HINTS & SOLUTIONS

Physical World & Measurement

Booklet No.: 271101

1. Ans: (2) power
Sol: $\text{power} = \frac{\text{Energy}}{\text{time}}$

2. Ans: (4) 127008
Sol: $n_1 = n_2\left[\frac{L_2}{L_1}\right]\left[\frac{T_2}{T_1}\right]^{-1}$
Given $n_2 = 9.8$ therefore,
$n_1 = 9.8\left[\frac{1m}{1km}\right]\left[\frac{1s}{1hr}\right]^{-2}$
$= 9.8\left[\frac{1m}{1000m}\right]\left[\frac{1s}{60\times60s}\right]^{-2}$
$= 9.8\left[\frac{1}{1000}\times60\times60\times60\times60\right]$
$n_1 = 98\times36\times36 = 127008$
$= 98\times36\times36 = 127008$ km / hr^2
$\therefore g = 127008$ km / hr^2

3. Ans: (4) 4
Sol : Area $A = 10L\times10L = 100L^2$
Percentage change in area
$= \frac{\Delta A}{A}\times100 = 2\times\frac{\Delta L}{L}\times100 = 2\times2\% = 4\%$

4. Ans: (3) W/ m^2 K^4
Sol : $E = \sigma AT^4$
E is energy dissipated per second.
$\sigma = \frac{E}{AT^4} = \frac{\text{Watt}}{m^2K^4}$

5. Ans: (4) $[MT^{-3}]$
Sol: Energy incident per unit area per second
$= \frac{\text{Energy}}{\text{area}\times\text{second}} = \frac{[ML^2T^{-2}]}{[L^2T]} = [MT^{-3}]$

6. Ans: (3) 0.42%
Sol : As shown in the figure.
$\frac{P}{Q} = \frac{\ell}{100-\ell}, P\alpha\frac{\ell}{100-\ell}$
$\frac{\Delta P}{P} = \frac{\Delta\ell}{\ell} + \frac{\Delta(100-\ell)}{100-\ell}$
$= \frac{\Delta\ell}{\ell} + \frac{\Delta\ell}{100-\ell}$
$= \frac{0.1}{40.0} + \frac{0.1}{60.0} \Rightarrow \frac{\Delta P}{P}\times100 = 0.42\%$

7. Ans: (3) Distance
Sol: Light year is a distance which light travels in one year.

8. Ans: (4) Ampere/ volt
Sol: Watt = Joule/ second = Ampere × volt = Ampere^2 × Ohm

9. Ans: (2) x = 1, y = -1/2, z
Sol:
Try out the given alternatives.
when x = 1, y = -1, z
$P^xS^yC^z = P^1S^{-1}C^1 = \frac{PC}{S} = \frac{[ML^{-1}T^{-3}][LT^{-1}]}{[ML^2T^{-3}/L^2T]} = [M^0L^2T^{-2}]$

10. Ans: (2) $L^{-1}T^{-1}$
Sol:
Dimensionally
$k = \frac{1}{2}LT^{-1}\times T = L$
also dimensionally
$\frac{1}{2}mv^2 \Rightarrow b = \frac{LT^{-1}}{T^{-1}} = LT^{-1}$

11. Ans: (4) 1/10 N
Sol: Least count $= \frac{1}{N} = \frac{1}{10}\text{cm} = \frac{1}{10N}$

12. Ans: (3) $[ML^2T^{-2}]$
Sol: $\tau = [\text{Force}\times\text{distance}] = [MLT^{-2}][L] = ML^2T^{-2}$

13. Ans: (2) $[LT^{-2}]$ [L] and [T]
Sol:
Dimensions of at = dimensions of velocity
$a.T = LT^{-1} \Rightarrow a = LT^{-2}$
Dimensions of c = dimensions of t
(two physical quantities of same dimension can only be added)
So, dimensions of c = t
Dimensions of $\frac{b}{t+c}$ = Dimensions of $\frac{b}{T+T} = LT^{-1} \Rightarrow b.T^{-1} = LT^{-1} \Rightarrow b = L$
So, answer is $[LT^{-2}][L]$

14. Ans: (1) $ML^{-1}T^{-1}$
Sol:
$\eta = \frac{F\Delta Z}{A\Delta V} = \frac{MLT^{-2}}{l^2}$

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NAME :

ROLL NUMBER

CENTRE NO.

TEST BOOKLET NO.

SUB :

EXAM NAME

NEET

INSTRUCTIONS

CORRECT METHOD

WRONG METHODS

SIGNATURE OF CANDIDATE

Before submitting the Answer Sheet, Candidate / Invigilator should check that Roll No., Centre No. & Test Booklet No. Have been filled in and marked correctly.

SIGNATURE OF INVIGILATOR

Lsoft Technologies 2016-17