MHT CET 2024 Question Paper (April 24 - Shift 1)

Physics Questions

Ques 1. Potential energy of a particle performing linear S.H.M is 0.1 π^2 x^2 joule. If the mass of a particle is 20g, find the frequency of S.H.M.?

Ans. 0.8 Hz

Ques 2. A star 'A' has Radiant power=3 times that of Sun,temperature was A=6000k Sun=2000k what is ratio of there radius

Ans. 1:27

Ques 3. Speed of wave=30m/s if distance between 11 creast is 1m then what is frequency (in Hz)

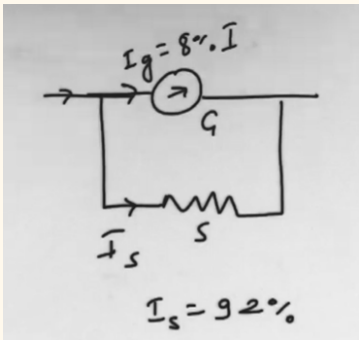
Ans. 330 Hz

Ques 4.The fundamental frequency of a closed organ pipe of length 20 cm is equal to the second overtone of an organ pipe open at both the ends. The length of the organ pipe open at both the ends is .

Ans. 1.2 m

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Ques 5. Ig = 8% * I .what is 'S'(shunt) connected in terms of G.



Ans. 2G/23

Ques 6. 3 charge +q kept at corner of equilateral triangle of side a, what would be it's total electrostatic potential energy (in terms of k)

Ans. $3kq^2/r$

Ques 7. time period of SHM is 2s with mass m, additional mass 40 gram added time period increase by 3s what is m(in gram)

Ans. 32 gram

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Biology Questions

Ques 1. Who coined the term 'root pressure theory'?

Ans. J. Priestley

Ques 2. How many of the following genotypes possibly represent normal wings in Drosophila?

(i) $Vg^{+}Vg^{+}$
(ii) $Vg^{+}Vg^{ni}$
(iii) $Vg^{+}Vg^{no}$
(iv) $Vg^{+}v^{st}$
(v) $Vg^{+}vg$

A (i), (ii) and (iii) only
B (i) and (ii) only
C Only (i)
D (i), (ii), (iii), (iv) and (v)

Ans. D

Ques 3. Given below are two statements :
Statement I: Cell wall is freely permeable.
Statement II: Plasma membrane is selectively permeable.
Choose the correct answer from the options given below with reference to the structure of root hair.
A Statement I is incorrect but Statement II is correct
B Both Statement I and Statement II are correct
C Both Statement I and Statement II are incorrect
D Statement I is correct but Statement II is incorrect

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Ans. B

Ques 4. Who discovered DNA?

Ans. F. Miesher

Ques 5. which of the following is not present in RNA

Ans. Thymine

Chemistry Questions

Ques 1. Non zero dipole moment

- **A. CCl_4**
- **B. CO_2**
- **C. Bf_3**
- **D. None of these**

Ans. D

Ques 2. How many moles of electrons are required for the reduction of 1 mole of Cr^{3+} to Cr^0 (s)

Ans. 3 moles of e^-

Ques 3. Monomer of bakelite

Ans. Phenol and formaldehyde

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