



2.  $J_{E \pm E_0 \pm E(E_0)} E_0 h E_1^{a(E_1/2)} n_{E_1} |E_1 x E_0| = k E_0^R E \pm E_0/2 : -$

16

(+)  $\left(\frac{1}{4} \times \frac{7}{16} + \frac{3}{22}\right) - \left(\frac{2}{7} \times \frac{4}{15}\right)$  1st of 100th off-bt.

(4) 2209 SÉE ÉMÉCEBÝ Eðfñ. ?

(Eò) 212<sup>0</sup>F °ü(ÉÉÉ®ÉÉ °Éä¶É0+°É (C) °Év<sup>a</sup>Éä Éò®ü.

(b) 12 Să 15% EòEò ?

3.  $\mathbb{J} \oplus \mathbb{E} \oplus \mathbb{E}(\mathbb{E} \oplus \mathbb{D})$  Endomorphismen  $n$   $\mathbb{J} \oplus \mathbb{E} \oplus \mathbb{E}(\mathbb{E} \oplus \mathbb{D})$   $\mathbb{O} \oplus \mathbb{E} \oplus \mathbb{E}(\mathbb{E} \oplus \mathbb{D}) = \mathbb{K} \oplus \mathbb{E} \oplus \mathbb{E}(\mathbb{E} \oplus \mathbb{D})$  :—

16

(+) 60 Edo efa'ē ē vefifōvā 45% iēfā 25% V°īē + ēēē = ēēē Edfē + o'ē ifū  
jēafēo vefifōvā ēvēē qēēē.

(4) 3844 SEE 7E6C9BpY E'E;EEMhEO {ErüEO |E'EEhEa Eðfð.

(E) BEđ SŦEđŦEŦEđ EđŦEđ EđŦEđ + EđŦEđ 10 EđŦEđ + EđŦEđ iŦEđ SŦEđŦEŦEđ EđŦEđ EđŦEđ.

(b) 1E] 6dEeEeE0 +EEE0 105 E"E'E0 +E1/2 iE®u 1E] 6dEeEeEa 1E]Ej; 03y 7EEeEE.

[illegible]

16

(+)  $\tau^0 i \bar{e} e \bar{e} e + \bar{e} e h e \tau^0 \bar{e} e e e \rightarrow \bar{e} e e e \rightarrow \bar{e} e e e$   $\rightarrow \bar{e} e e e$

(၁) ပုဒ်မိမိအား ဝါးပင် + မြေ အောက်တွင် ထည့်သွင်းပါ ?

(Eò) IÉÉb€<sup>a</sup>ÉÉiÉ °ÉÉÉÉ.—

(1) +kÉäÉÓMÉ |ÉÊGò<sup>a</sup>ÉE

(2)  $\frac{1}{2} \text{ lb } \times \text{ÉMÉ} = \text{ÉÉG}^{\text{a}}\text{ÉE.}$

(b)  $i\hbar\frac{\partial}{\partial t}\psi = \hat{H}\psi$  where  $\hat{H} = \frac{\hat{p}^2}{2m} + V(\mathbf{r})$  and  $\psi(\mathbf{r}, t)$  is the wave function.

5. **IÉÉb€ÉEÍÉ °ÉÉÉÉ. (EòhíÉÉ) SÉ® :**—

16

(+)  $\mathbb{R}[E \cup \{E\}] \cong \mathbb{R}[E] \oplus \mathbb{R}[E]$

$$(d) \{E_j E \pm E \partial E x E$$

(Eò) SÉÉÉòÉäÉ

(b) ~~ÓÉÉÉÉ®Ú ±ÉÉÉÉ~~

(<) SÉÉÉÉÉ MÉÉÉÉÉ

[illegible]

16

(+)  $\frac{1}{2} \text{C}^{\circ}\text{EE}^{\circ}\text{E}^{\circ}\text{E}^{\circ} + \text{EE}^{\circ}\text{E}^{\circ}\text{E}^{\circ}$

(4)  $b \neq \pm 1$   $\Gamma^{\otimes \ell} \text{uf} \tilde{0}$   $(\Gamma Z E \tilde{0} - Z E \tilde{0})$ ,  $\pm \Gamma \Gamma V E \tilde{k} < \Gamma \delta \tilde{0} + \Gamma E b i \tilde{0} E \tilde{e} f \tilde{0}$ .

(Eò) ±[ÉÉ'É'É' ; ð> Æoq[ÉxÉ' ð-Éä] δÉÒ +ÉÉbiÉÒ EðÉfÉ.

(b) +[>0] 0EE<b÷ [[<sup>a</sup>E G d f]] E] 0SE0 +EE b iE0 Ed f ME i<sup>a</sup>EESE0 xEE Ea E+1/2b.

**(ENGLISH)**

[ TIME ALLOWED—3 HOURS ]

(MARKS—100)

**MATHS, SCIENCE AND DRAWING (THEORY-II)***Instructions.*—(1) All question are *Compulsory*.

(2) Draw neat sketches to explain your answer.

**Marks**1. (a) Fill in the blanks (*any five*) :—

5

- (i) Octagan has ..... side.
- (ii) Area of circle = .....
- (iii) 1 Gallon = ..... liters.
- (iv) Find the square root of 3136 = ..... .
- (v) Efficiency (in %) = ..... .
- (vi) 1 joule = ..... Erg.

(b) State whether *true* of *false* (*any five*) :—

5

- (i) 1 HP metric system is 735.5 watts.
- (ii) Mass is vector quantity.
- (iii) Aliminium is a good conductar of eletricity.
- (iv) One micron is equal to 0.001 mm.
- (v) Bronze is an alloy of copper and zinc.
- (vi) The melting point of ferrous metal is low.

(c) State long form (*any five*) :—

5

- (i) F.P.S.
- (ii) M.K.S.
- (iii) R.P.M
- (iv) M.A.
- (v) P.E.
- (vi) C.G.S.

(d) Match the pairs :—

5

' A ' Group

' B ' Group

- |                             |               |
|-----------------------------|---------------|
| (i) 746 watt.               | (a) $\pi r^2$ |
| (ii) perimeter of rectangle | (b) W/T       |
| (iii) potential energy      | (c) mgh       |
| (iv) Unit of heat           | (d) Newton    |
| (v) Area of circle          | (e) 1 HP      |
| (vi) Unit of mass           | (f) Z (L+b)   |

[ turn over

2. Answer any *two* of the following :— 16
- (a) Simplify—  $\left(\frac{1}{4} \times \frac{7}{16} + \frac{3}{22}\right) - \left(\frac{2}{7} \times \frac{4}{15}\right)$
- (b) Find square root of 2209.
- (c) Convert 212°F in celsius.
- (d) 15% of what no. is 12 ?
3. Attempt any *two* of the following :— 16
- (a) 60 kg. alloy consist of 45% copper, 25% of zinc and remaining tin. find the weight of each metal in alloy.
- (b) Find sq. root of 3844 by division method.
- (c) The digonal of square measuring is 10 cm. ? Find the area of square.
- (d) A hexagonal has side 105 mm of length find the area of hexagon.
4. Write brief answer (any *two*) :— 16
- (a) Explain the difference between mass and weight.
- (b) What are the advantages and disadvantages of friction ?
- (c) Write short notes on—
- (i) Annealing process.
- (ii) Hardening process.
- (d) Define the terms stress, strain and modulus of elasticity.
5. Write short notes (any *four*) :— 16
- (a) Blue print reading
- (b) Letter writting
- (c) Square
- (d) Parallelogram
- (e) Magnet properties.
6. Answer any *two* of the following :— 16
- (a) Draw a free hand sketch of Hacksaw frame.
- (b) Draw a figure of double rivet (Zig-Zag) lap joint.
- (c) Draw a free hand sketch of lewis foundation bolt.
- (d) Draw a figure of a outside micrometer and name it.
- \_\_\_\_\_