

22313

23242

3 Hours / 70 Marks

Seat No.

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- Instructions* –
- (1) All Questions are *Compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Assume suitable data, if necessary.
 - (6) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

- 1. Attempt any FIVE of the following: **10****
- a) List the any four equipments used for size reduction.
 - b) Define mesh number and cut diameter.
 - c) State Stokes Law.
 - d) List any two types of screening equipments.
 - e) Give principle of electrostatic precipitators.
 - f) Give any two industrial applications of conveyors.
 - g) Define Mixing Index.

P.T.O.

- 2. Attempt any THREE of the following:** **12**
- a) Explain the factors affecting the size reduction of the given solid.
 - b) Describe the construction and working of froath floatation cell.
 - c) Explain the any four factors affecting the filtration rate.
 - d) Describe the working of cyclone seperator with suitable diagram.
- 3. Attempt any THREE of the following:** **12**
- a) Describe open circuit and close circuit grinding.
 - b) Explain 1 - 2 - 3 - 2 - 1 - 2 - 3 - 2 - filtration system.
 - c) Explain screen capacity and screen efficiency.
 - d) Explain the construction and working of pneumatic conveyors.
 - e) Explain the concept of swirling and vortexing.
- 4. Attempt any THREE of the following:** **12**
- a) Draw neat sketch of Rotary drum filter and explain its working.
 - b) List the types of agitators and explain radial and axial flow pattern.
 - c) Describe the construction and working of belt conveyors with a neat sketch.
 - d) Explain differential and cumulative screen analysis.
- 5. Attempt any TWO of the following:** **12**
- a) Explain the construction and working of Basket Type centrifuge with a neat sketch.
 - b) Describe the construction and working of belt conveyor with a neat sketch.
 - c) Define Kicks Law, Rittingers Law, Bond's Law crushing efficiency with mathematical equations.

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Marks

6. Attempt any TWO of the following:

12

- a) Describe the construction working and principle of Jaw crusher with a neat sketch.
 - b) Explain the construction and working of Ribbon blender with a neat sketch.
 - c) With neat sketch explain the working of Electrostatic precipitators.
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