



C09-MNG-405

3516

BOARD DIPLOMA EXAMINATION, (C-09)

MARCH / APRIL - 2019

DMNG - IV SEMESTER EXAMINATION

MINE ENVIRONMENTAL ENGG.

Time : 3 Hours]

[Total Marks : 80

PART - A

3×10=30

- Instructions :*
- (1) Answer *ALL* questions.
 - (2) Each question carries *THREE* marks.
 - (3) Answer should be brief and straight to the point.

- 1 State the purpose of Ventilation.
- 2 Define the terms down cast and up cast shafts with sketches.
- 3 Convert height of motive column into pressure and vice versa.
- 4 List the methods of controlling the quantity of Air Delivered by the Fan.
- 5 List the ventilation devices used for coursing the air current.
- 6 List the ideal conditions for splitting.
- 7 State the relation between pressure, resistance and quantity through formula.
- 8 Define the term Booster Fan.
- 9 List the methods of quantity survey.
- 10 List the equipment required for pressure survey.

PART - B

10×5=50

- Instructions :**
- (1) Answer any **FIVE** questions.
 - (2) Each question carries **TEN** marks.
 - (3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

- 11 Describe the constructional details of backward bladed centrifugal fan and state the function of each part and drive.
- 12 Define the terms of manometric efficiency, theoretical depression, effective depression, mechanical efficiency and overall efficiency of mine fan. State the formula for each of the above.
- 13 Explain the effects of mine air ways in series and parallel.
- 14 State the laws of mine air friction. State the Atkinson's equation.
- 15 Explain splitting of air with sketch.
- 16 Explain the auxiliary ventilation system with sketch.
- 17 Explain any one method of conducting pressure survey with sketch.
- 18 (a) Explain the term 'Kata Factor'.
(b) List the precautions for accurate ventilation survey.