

IMPORTANT QUESTIONS OF MH&L

INTRODUCTION TO SURFACE & UNDERGROUND HAULAGE SYSTEM

Marks-2

- 1) How many types of rope haulage system are there and elaborate them ?
- 2) What do you mean by gravity rope haulage ?
- 3) State difference between surface & underground haulage system ?
- 4) Discuss Clifton pulley

Marks-5

- 1) Explain double drum balanced direct rope haulage ?
- 2) State applicability condition and description of main & tail rope haulage ?
- 3) State applicability condition and description of Endless rope haulage ?

Marks-10

- 1) Classify underground & surface haulage system ?
- 2) Explain factors affecting design of a haulage system ?

CONVEYORS

Mark-2

- 1) What do you mean by idlers and its use?
- 2) Define different pulley system used in mines ?
- 3) Define function of snub pulley?
- 4) State and explain drive drum and driving drum ?

Mark-5

- 1) State advantages and disadvantages of using belt conveyor ?
- 2) State difference between belt conveyor and steel cord conveyor ?
- 3) State applicability condition of belt conveyor ?
- 4) Find dispatch capacity of conveyor if belt speed is 5 m/sec and effective area of cross section is 10 m²

Mark-10

- 1) State factors affecting design of belt conveyor, cable belt conveyor and steel cord conveyor ?

2) Describe constructional features of belt conveyor & cable belt conveyor ?

LOCOMOTIVE HAULAGE

Marks 2-

- 1) What is gradient of road way in locomotive haulage, explain briefly?
- 2) State conditions if we use diesel loco in exhaust gases?
- 3) For what purpose small locos are used ?
- 4) For what purpose mine cars are used ?

Marks 5 –

- 1) Describe in brief constructional feature of locomotive haulage ?
- 2) State principle of operation of Diesel locomotive ?
- 3) State in brief operation of Overhead wire locomotive ?
- 4) State advantages of trolley wire locomotive ?

Marks 10-

- 1) State different types of locomotive haulage ?
- 2) State applicability merits & demerits of locomotive haulage ?
- 3) Describe basic constructional features of trolley wire ?
- 4) Describe basic constructional features of compressed air, diesel & battery locomotives ?
- 5) Describe safety device of diesel locomotive including flame trap around exhaust conditioner box ?

AERIAL ROPEWAYS

Marks 5-

- 1) State & explain different type of aerial ropeways ?
- 2) State & explain advantages & disadvantages of aerial rope ways ?
- 3) State & explain applicability condition of aerial rope ways ?
- 4) Describe bicable & thin cable ropeways ?

Marks 10-

- 1) State advantages & disadvantages of aerial rope ways ?
- 2) Describe loading ,unloading & other characteristics of aerial ropeways ?

HYDRAULIC TRANSPORTATION OF SOLIDS

2 Marks-

- 1) Discuss gravitational theory ?
- 2) Explain suspension of solid particles in liquid ?
- 3) What do you mean by hydraulic feeder and explain it ?
- 4) What do you mean by hydraulic elevator and explain it ?
- 5) What do you mean by hydraulic dewatering device and explain it ?

5 Marks-

- 1) Define hydraulic transportation ?
- 2) Discuss theory of hydraulic transportation of solids in mines ?

10 Marks-

- 1) Design hydraulic transportation system?
- 2) State applicability, advantages & disadvantages of hydraulic transportation in mines ?

MAN RIDIN HAULAGE

2 Marks-

- 1) State reasons for using man riding system in mines ?
- 2) State different rope haulages for used as man riding system ?
- 3) In case of emergency how much space should be provided for man to jump ?

5 Marks-I

- 1) Describe constructional feature of monorail , deorail ?
- 2) What do you mean by safety gate ?

10 Marks-

- 1) State different types of man riding system ?
- 2) State and explain different rope haulages for used as man riding system ?
- 3) Describe constructional feature of flight chairs and conveyor system ?
- 4) Discuss man riding in tubs or cars ?

SPIRAL CHUTES

2 Marks-

- 1) What do you mean by pitch of spiral helix ?

2) State different angles associated with spiral helix ?

5 Marks-

1) State advantages and disadvantages of spiral chutes ?

10 Marks-

1) Explain working principle of spiral chutes ?

2) Describe constructional features of spiral chutes ?

FLOW OF MATERIAL IN BINS ,BUNKERS

10 Marks-

1) Explain flow of material in bins and bunkers ?

2) Design bins and bunkers for loading of 5 tonne/min. from outlet having density 3tonne/m³?

3) Describe bins and bunkers ?