

## PROVISIONAL ANSWER KEY

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Question1:-Opencast mining is most economical under which of the following conditions?

A:-Stripping ratio less than 4:1, depth less than 200 m, and gentle dip

B:-Vertical veins at depth greater than 500 m

C:-Massive ore deposit with stripping ratio greater than 10 : 1

D:-Presence of unstable and soft overburden

Correct Answer:- Option-A

Question2:-In opencast mining, the main objective of constructing a box cut is to:

A:-Immediately recover mineral from the exposed surface

B:-Establish the initial excavation and provide safe access to the ore body or coal seam

C:-Serve as a permanent dumping site for overburden

D:-Develop drainage passages to control mine water

Correct Answer:- Option-B

Question3:-Work in a higher seam shall not be carried out over:

A:-Any developed district

B:-A depillared area

C:-An area in the lower seam that may collapse

D:-Any ventilated district

Correct Answer:- Option-C

Question4:-Which of the following geological conditions makes opencast (open pit) mining most economically viable?

A:-Steeply dipping ore bodies overlain by soft, unconsolidated overburden

B:-Shallow, nearly horizontal to gently dipping deposits with a moderate stripping ratio and competent hard rock

C:-Very deep ore bodies (>500 m) affected by complex faulting

D:-Narrow, vertical veins occurring in hard metamorphic rock

Correct Answer:- Option-B

Question5:-Under which geological setting is the development of an incline (decline) access to an underground ore body most suitable?

A:-A near-surface, horizontally bedded coal seam with excellent roof conditions

B:-A shallow to moderately deep ore body dipping at 30-60° with fair geomechanical characteristics

C:-A flat-lying deposit located at 800 m depth affected by major geological disturbances

D:-A vertical, narrow vein surrounded by weak and unstable rock mass

Correct Answer:- Option-B

Question6:-For a deep-seated metal ore body located at approximately 600 m depth under competent geomechanical conditions, which mine opening method is most appropriate?

A:-Incline decline alone (without shaft)

B:-Multiple shafts with connecting levels

C:-Shaft combined with decline/ramp for emergency access and equipment movement

D:-Adit approach through hillside

Correct Answer:- Option-C

Question7:-Which of the following represents the primary advantage of using a dragline in opencast mining compared to shovel-excavator combinations?

A:-Dragline has shorter cycle time and works on top of the seam

B:-Dragline can reach farther distances and work from standing ground, making it suitable for thick overburden removal with lower fuel consumption per ton

C:-Dragline is used exclusively for in-pit crushing

D:-Dragline is only suitable for soft coal extraction

Correct Answer:- Option-C

Question8:-Which underground mining method is most suitable for deep coal seams (>600 m) having uniform thickness (2-4 m) and competent roof conditions?

A:-Room and Pillar (Bord and Pillar) mining

B:-Longwall mining (mechanized advancing or retreating)

C:-Incline-based shallow mining

D:-Cut and Fill mining

Correct Answer:- Option-B

Question9:-Room and Pillar mining (also known as Bord and Pillar mining) is primarily suitable for which type of ore deposit?

A:-Steeply dipping vein deposits requiring selective mining above 400 m depth

B:-Relatively at-lying deposits like coal, salt, potash, and limestone where horizontal arrays of rooms are created with supporting pillars left in-place

C:-Massive ore bodies requiring bulk extraction with gravity-driven caving

D:-Weak unconsolidated deposits requiring cut and fill methodology

Correct Answer:- Option-B

Question10:-In a coal mine where the seam depth is 120 meters and the width of galleries does not exceed 4.2 meters, what shall be the minimum distance between centres of adjacent pillars as per regulation?

A:-19.5 m

B:-22.5 m

C:-25.5 m

D:-30.5 m

Correct Answer:- Option-B

Question11:-The main function of drilling fluid is

A:-Remove cuttings

B:-Formation of mud cake

C:-Cools the bit

D:-All above

Correct Answer:- Option-D

Question12:-Penetration rate in drilling mainly depends on

A:-Colour of rock

B:-Rock strength and drill power

C:-Mine depth

D:-Number of workers

Correct Answer:- Option-B

Question13:-In rotary drilling, rock breaking occurs mainly due to

A:-Impact force

B:-Abrasion and crushing

C:-Thermal melting

D:-Chemical reaction

Correct Answer:- Option-B

Question14:-In a percussive drilling, the hole depth is 11 m. The stemming material was filled in the hole up to 3 m. Find the explosive column length, if the subgrade drilling is 1 m.

A:-7 m

B:-8 m

C:-9 m

D:-10 m

Correct Answer:- Option-C

Question15:-A drill reports penetration rate of 1.2 m/min. Machine availability = 80%; Utilization efficiency =75%. Find actual output per hour (m/hr).

A:-43.2 m/hr

B:-47.2 m/hr

C:-50.2 m/hr

D:-49.2 m/hr

Correct Answer:- Option-A

Question16:-Calculation made to assess the amount of wear on drilling line is

A:-Ton-miles

B:-Ton-meters

C:-Ton-foot

D:-Ton-km

Correct Answer:- Option-A

Question17:-A parameter used to evaluate various drilling line arrangements is

A:-Derrick load

B:-Derrick efficiency

C:-Hook load

D:-Wind load

Correct Answer:- Option-B

Question18:-The generated rig power must be converted to \_\_\_\_\_ in order to run and pull the drillstring

A:-Electrical power

B:-Mechanical power

C:-Hydraulic power

D:-None of the above

Correct Answer:- Option-B

Question19:-To maintain the drilling line, which one of the following actions should be done frequently?

- A:-Perform a specified cut and slip program
- B:-Change all the drilling line
- C:-Inspect all the drilling line after each well drilled
- D:-All of the above

Correct Answer:- Option-A

Question20:-Find drilling cost per tonne

Hole depth = 12 m

Number of holes = 80

Volume per hole =  $3 \times 3.5 \times 12$

Rock density =  $2.5 \text{ t/m}^3$

- A:-Rs.8
- B:-Rs.9
- C:-Rs.10
- D:-None of the above

Correct Answer:- Option-D

Question21:-During transportation in a mine, detonators shall be :

- A:-Carried along with cartridges in the same container
- B:-Carried separately in a closed container
- C:-Kept inside an explosive box but separated by paper
- D:-Carried in the blaster's pocket

Correct Answer:- Option-B

Question22:-In underground mines, explosives shall not be transported :

- A:-In special tubs
- B:-During non-working hours
- C:-Along with persons in the same cage
- D:-In separate containers

Correct Answer:- Option-C

Question23:-In a gassy underground coal mine, shot firing shall not be done if methane exceeds :

A:-0.5%

B:-1.25%

C:-2%

D:-5%

Correct Answer:- Option-B

Question24:-In underground gassy coal mines, only which explosives are permitted?

A:-ANFO

B:-Slurry explosives

C:-Permitted explosives

D:-Gelignite

Correct Answer:- Option-C

Question25:-The main purpose of stemming is to :

A:-Reduce noise

B:-Prevent fly rock only

C:-Confine gases for better fragmentation

D:-Decrease drilling cost

Correct Answer:- Option-C

Question26:-Delay detonators are used mainly to:

A:-Increase explosive power

B:-Reduce ground vibration and improve fragmentation

C:-Avoid stemming

D:-Reduce drilling depth

Correct Answer:- Option-B

Question27:-Continuity of electric detonator circuit is checked using :

A:-Torch battery

B:-Multimeter (high current)

C:-Approved blasting galvanometer

D:-Direct firing line

Correct Answer:- Option-C

Question28:-Subgrade drilling in bench blasting is done to :

A:-Increase bench height

B:-Avoid toe formation

C:-Increase burden

D:-Reduce stemming

Correct Answer:- Option-B

Question29:-Ground vibration is directly proportional to :

A:-Total explosive in mine

B:-Maximum charge per delay

C:-Hole diameter only

D:-Bench height only

Correct Answer:- Option-B

Question30:-When blasting near surface structures, the most important control parameter is :

A:-Hole depth

B:-Bench width

C:-Maximum charge per delay

D:-Stemming color

Correct Answer:- Option-C

Question31:-Which of the following equipment is classified as Heavy Earth Moving Machinery (HEMM)?

A:-Hand-held pneumatic jack hammer

B:-Drill machines capable of drilling holes up to 50 mm diameter

C:-Underground LHD

D:-Opencast shovel

Correct Answer:- Option-D

Question32:-When approaching a stripping or loading equipment, what should a dumper operator do?

A:-Overtake the equipment quickly to avoid delay

B:-Pass the equipment from the blind side

C:-Sound the audible warning signal and pass immediately

D:-Sound the audible warning signal and pass only after receiving a proper audible signal in reply

Correct Answer:- Option-D

Question33:-Which of the following is NOT a continuous mode of transportation system?

A:-Dumper

B:-Belt conveyor

C:-Slurry pipeline

D:-Aerial ropeway

Correct Answer:- Option-A

Question34:-As per DGMS guidelines for HEMM in opencast mines, the minimum width of a haul road should be \_\_\_\_\_.

A:-Two times the width of the largest vehicle

B:-Three times the width of the largest vehicle

C:-Three times the width of the largest vehicle plus 5 m

D:-Four times the width of the largest vehicle

Correct Answer:- Option-C

Question35:-In a shovel -dumper combination, the truck loading time by the shovel is 7 minutes. The total truck cycle time is 22 minutes. For maximizing production, the number of dumpers to be assigned to the shovel is \_\_\_\_\_.

A:-1

B:-2

C:-3

D:-4

Correct Answer:- Option-D

Question36:-The correct sequence of layers for haul road construction from bottom to top is \_\_\_\_\_.

A:-Wearing surface → Base → Subbase → Subgrade

B:-Subgrade → Subbase → Base → Wearing Surface

C:-Base → Subbase → Subgrade → Wearing surface

D:-Subbase → Subgrade → Base → Wearing surface

Correct Answer:- Option-B

Question37:-The role of idlers in a belt conveyor is to \_\_\_\_\_.

A:-Drive the conveyor belt

B:-Support the belt and the conveyed material

C:-Control the speed of the belt

D:-Provide tension to the belt

Correct Answer:- Option-B

Question38:-In a shovel-dumper combination, the shovel loads 25 tonnes per swing cycle into a dumper. The swing cycle time of the shovel is 1 minute. If the dumper capacity is 110 tonnes, the total time required to load one dumper is\_\_\_\_\_.

A:-2 minutes

B:-3 minutes

C:-4 minutes

D:-5 minutes

Correct Answer:- Option-C

Question39:-In an opencast coal mine, 3.0 million cubic meters of overburden is to be removed to extract 1.0 million tonnes of coal.

The stripping ration ( $m^3$ /tonne) is \_\_\_\_\_.

A:-1 : 1

B:-2 : 1

C:-3 : 1

D:-4 : 1

Correct Answer:- Option-C

Question40:-In mine haul roads for trucks and dumpers, parapet walls or berms are provided \_\_\_\_\_.

A:-At the center of the haul road

B:-Along the edge of any road that exists above the level of surrounding area.

C:-Only at loading and unloading points

D:-Only on downhill gradients

Correct Answer:- Option-B

Question41:-In slope stability analysis of an open pit, the overall slope angle is primarily governed by :

A:-Bench height only

B:-Rock mass strength, groundwater conditions, and structural discontinuities

C:-Drill hole diameter

D:-Haul road width

Correct Answer:- Option-B

Question42:-Which of the following methods is most commonly used for designing stable overall slopes in large open pits?

A:-RMR classification only

B:-Limit equilibrium analysis (e.g., Bishop/Janbu methods)

C:-Core recovery percentage

D:-Blast fragmentation analysis

Correct Answer:- Option-B

Question43:-The purpose of providing a **catch berm** in bench design is to :

A:-Increase drilling speed

B:-Provide space for equipment parking

C:-Arrest falling rocks and prevent them from reaching lower benches

D:-Improve blast efficiency

Correct Answer:- Option-C

Question44:-If bench height is increased without increasing berm width, the likely consequence is :

A:-Improved slope stability

B:-Reduced overall slope angle

C:-Increased risk of rockfall reaching lower levels

D:-Reduced production

Correct Answer:- Option-C

Question45:-An open pit has benches of height 10 m and berm width 5 m. The bench face angle is  $70^\circ$ . What is the approximate overall slope angle?

A:- $45^\circ$

B:- $52^\circ$

C:- $58^\circ$

D:- $65^\circ$

Correct Answer:- Option-A

Question46:-A pit is to be developed to a depth of 90 m using a bench height of 10 m. How many benches are required?

A:-7

B:-8

C:-9

D:-10

Correct Answer:- Option-C

Question47:-Which factor most affects overall slope stability in an open pit?

A:-Drill diameter

B:-Rock mass structure and groundwater

C:-Truck capacity

D:-Explosive type

Correct Answer:- Option-B

Question48:-If the maximum safe catch berm width required is  $0.3 \times$  bench height, what should be the berm width for a 15 m bench?

A:-3 m

B:-4.5 m

C:-6 m

D:-7.5 m

Correct Answer:- Option-B

Question49:-The correct definition of the "reportable injury" is :

A:-Any injury other than a serious bodily injury which involves, or in all probability will involve, the enforced absence of the injured person from work for a period of 52 hours or more

B:-Any injury other than a serious bodily injury which involves, or in all probability will involve, the enforced absence of the injured person from work for a period of 72 hours or more

C:-Any injury which involves, or in all probability will involve, the permanent lost of any part or section of a body

D:-Any injury which involves, the permanent loss of or injury to the sight or hearing

Correct Answer:- Option-B

Question50:-Which is wrong statement in regards with the hours and limitation of employment as per mines act 1952?

A:-No person shall be allowed to work in a mine on more than six days in any one week

B:-No adult employed above ground in a mine shall be required or allowed to work for more than forty-eight hours in any week or for more than nine hours in any day

C:-No adult employed below ground in a mine shall be allowed to work for more than forty-two hours in any week or for more than nine hours in any day

D:-No person shall be required or allowed to work in a mine if he has already been working in any other mine within the preceding twelve hours

Correct Answer:- Option-C

Question51:-How many qualified mining engineers are appointed by Central Government in Committee formed under mines act 1952, section -12?

A:-1

B:-2

C:-3

D:-4

Correct Answer:- Option-B

Question52:-By which section of mines act 1952 the Chief Inspector may, by order in writing, prohibit the employment in the mine or any part thereof ?

A:-22A

B:-22

C:-23A

D:-23

Correct Answer:- Option-A

Question53:-Which is not the powers of Inspector of Mines as per mines act 1952?

A:-Make such examination and inquiry as he thinks fit in order to ascertain whether the provisions of this Act and of the regulations, rules and bye-laws and of any orders made thereunder are observed in the case of any mine

B:-Enter, inspect and examine any mine or any part thereof at any time by day or night

C:-Examine into, and make inquiry respecting, the state and condition of any mine

D:-Prohibit or restrict the exercise of power by any Inspector

Correct Answer:- Option-D

Question54:-Which is wrong statement?

A:-By laws are approved by Central Government

B:-Calendar year is twelve months beginning with the first day of January

C:-The Chief Inspector of mines is the chairman of Committee formed under mines act 1952

D:-No person shall be appointed to be Chief Inspector or an Inspector, or having been appointed shall continue to hold such office, who is or becomes directly or indirectly interested in any mine or mining rights in India

Correct Answer:- Option-C

Question55:-How much fine is defined in Mines act 1952 for use of false certificates of fitness?

A:-Imprisonment for a term which may extend to six months, or with fine which may extend to two hundred rupees, or with both

B:-Imprisonment for a term which may extend to one month, or with fine which may extend to two hundred rupees, or with both

C:-Imprisonment for a term which may extend to two months, or with fine which may extend to five hundred rupees, or with both

D:-Imprisonment for a term which may extend to twelve months, or with fine which may extend to one thousand rupees, or with both

Correct Answer:- Option-B

Question56:-Who is not being appointed as 'Competent Person' in the mines?

A:-Sampler

B:-Blaster

C:-Drill helper

D:-Attendant

Correct Answer:- Option-B

Question57:-In connection with blasting operation, misfire means

A:-Failure to ignite a detonator

B:-Failure to connect the cartridges

C:-Failure to explode the entire charge or explosives in a shot hole

D:-Insufficient stemming of shot holes

Correct Answer:- Option-C

Question58:-The preparation of charges, the charging and stemming of holes shall be carried out by or under the personal supervision of \_\_\_\_\_

A:-Clerk

B:-Time keeper

C:-Blaster

D:-Overseer

Correct Answer:- Option-C

Question59:-No tree, loose stone or debris shall unless otherwise permitted in writing by the Chief Inspector be allowed to remain within a distance of \_\_\_\_\_ metres from the edge or side of the excavation

A:-2 metres

B:-3 metres

C:-5 metres

D:-2.5 metres

Correct Answer:- Option-B

Question60:-No drill machine shall be deployed in the mines for boring a shothole unless it allows a clearance of at least \_\_\_\_\_ centimetre over the diameter of the cartridge of explosive which it is intended to use.

A:-0.1 centimetre

B:-0.2 centimetre

C:-0.3 centimetre

D:-0.5 centimetre

Correct Answer:- Option-C

Question61:-In the opencast mines, the cast boosters are generally used for

A:-the blasting in hot strata

B:-the boulders blasting

C:-the blasting bulk SME

D:-the solid blasting

Correct Answer:- Option-C

Question62:-No shothole shall be fired by a fuse less than \_\_\_\_\_ in length

A:-1.20 m

B:-0.75 m

C:-0.50 m

D:-1.00 m

Correct Answer:- Option-A

Question63:-In the case of an opencast working, where any permanent building or structure of permanent nature, not belonging to the owner, lies within the danger zone, the aggregate maximum charge in all the holes fired at one time shall not exceed \_\_\_\_\_

A:-Ten kilograms

B:-Three kilograms

C:-Five Kilograms

D:-Two kilograms

Correct Answer:- Option-D

Question64:-A shot-hole or part of a shot-hole remaining after being charged with explosive and blasted, is known as \_\_\_\_\_.

A:-Misfired shot

B:-Socket

C:-Deflagration

D:-Side cut

Correct Answer:- Option-B

Question65:-Under the provisions of MMR 1961, the danger zone in the blasting refers to the entire area falling within a radius of \_\_\_\_\_ metres from the place of firing.

A:-200 m

B:-300 m

C:-500 m

D:-50 m

Correct Answer:- Option-B

Question66:-A horizontal excavation driven along the strike of ore body is called :

A:-Crosscut

B:-Drift

C:-Winze

D:-Raise

Correct Answer:- Option-B

Question67:-A horizontal opening driven perpendicular to the ore body is called :

A:-Drift

B:-Raise

C:-Crosscut

D:-Shaft

Correct Answer:- Option-C

Question68:-Stowing in underground mines is mainly done to :

A:-Increase production

B:-Support roof and control subsidence

C:-Improve grade

D:-Reduce ventilation

Correct Answer:- Option-B

Question69:-Hydraulic stowing uses :

A:-Waste rock only

B:-Sand-water slurry

C:-Timber

D:-Cement blocks

Correct Answer:- Option-B

Question70:-Assertion (A) : Development work must precede stoping operations in underground mines.

Reason (R) : Development provides access, ventilation, drainage, and haulage infrastructure required for safe extraction

Choose the correct option:

A:-Both Assertion (A) and Reason (R) are true, and R is the correct explanation of A.

B:-Both A and R are true, but R is NOT the correct explanation of A.

C:-A is true, but R is false

D:-A is false, but R is true

Correct Answer:- Option-A

Question71:-Assertion (A) : A raise is driven downward from one level to another.

Reason (R) : Raises are primarily used for ore passes and ventilation connections.

Choose the correct option:

A:-Both Assertion (A) and Reason (R) are true, and R is the correct explanation of A.

B:-Both A and R are true, but R is NOT the correct explanation of A.

C:-A is true, but R is false

D:-A is false, but R is true

Correct Answer:- Option-D

Question72:-Assertion (A) : Crosscuts are driven perpendicular to the ore body strike.

Reason (R) : Crosscuts are mainly used to connect parallel drifts and access the ore body.

Choose the correct option:

A:-Both Assertion (A) and Reason (R) are true, and R is the correct explanation of A.

B:-Both A and R are true, but R is NOT the correct explanation of A.

C:-A is true, but R is false

D:-A is false, but R is true

Correct Answer:- Option-A

Question73:-Assertion (A) : Stowing has no impact on mine stability.

Reason (R) : It only disposes of waste material underground

Choose the correct option:

A:-Both Assertion (A) and Reason (R) are true, and R is the correct explanation of A.

B:-Both A and R are true, but R is NOT the correct explanation of A.

C:-A is true, but R is false

D:-A is false, but R is true

Correct Answer:- Option-D

Question74:-Assertion (A): Raise boring improves safety compared to conventional raising.

Reason (R) : It eliminates the need for workers to operate in unsupported vertical openings.

Choose the correct option:

A:-Both Assertion (A) and Reason (R) are true, and R is the correct explanation of A

B:-Both A and R are true, but R is NOT the correct explanation of A

C:-A is true, but R is false

D:-A is false, but R is true

Correct Answer:- Option-A

Question75:-Assertion (A) : Block caving is considered a selective mining method.

Reason (R) : The method relies on controlled caving of the ore body under gravity.

Choose the correct option:

A:-Both Assertion (A) and Reason (R) are true, and R is the correct explanation of A.

B:-Both A and R are true, but R is NOT the correct explanation of A.

C:-A is true, but R is false.

D:-A is false, but R is true.

Correct Answer:- Option-D

Question76:-Which of the following geological conditions necessitates systematic sounding due to unreliable visual roof assessment?

A:-Massive sandstone roof

B:-Laminated shale roof

C:-Igneous intrusion

D:-Thick coal roof

Correct Answer:- Option-B

Question77:-The side of a strike roadway in an inclined seam that experiences greater roof instability is the \_\_\_\_\_

A:-Footwall side

B:-Hangwall side

C:-Centre of the roadway

D:-Side with supports

Correct Answer:- Option-B

Question78:-Which of the following represents the safest sequence for roof examination in an underground working face?

A:-Roof→Sides→Floor

B:-Sides→Roof→Floor

C:-Far→Near→Roof→Sides

D:-Near→Far→Roof→Sides

Correct Answer:- Option-C

Question79:-Which of the following tools is most commonly use for routine roof sounding in underground coal mines?

A:-Schmidt hammer

B:-Torque wrench

C:-Scaling bar

D:-Borehole camera

Correct Answer:- Option-C

Question80:-Which instrument provides a quick visual indication of roof movement without requiring electrical power?

A:-Stress meter

B:-Borehole extensometer

C:-Load cell

D:-Tell-tale

Correct Answer:- Option-D

Question81:-Which instrument is primarily used to measure closure between roof and floor in an underground roadway?

A:-Extensometer

B:-Stress meter

C:-Convergence meter

D:-Load cell

Correct Answer:- Option-C

Question82:-Which instrument is most suitable for detecting progressive bed separation in laminated coal mine roofs before surface manifestation?

A:-Single-point tell-tale

B:-Convergence meter

C:-Multi-point borehole extensometer

D:-Hydraulic prop pressure gauge

Correct Answer:- Option-C

Question83:-For a deep, time-dependent deformation environment, the most effective monitoring strategy is to combine :

A:-Tells-tales and prop pressure gauges

B:-Load cells and stress meters

C:-Convergence meters and multi-point extensometers

D:-Borehole cameras and gas sensors

Correct Answer:- Option-C

Question84:-The plastic-elastic boundary shifts closer to excavation when:

A:-Reinforcement is effective

B:-Support is removed

C:-Bolt spacing increases

D:-Grout fails

Correct Answer:- Option-A

Question85:-If support is too flexible, it may :

A:-Cause catastrophic stiffness

B:-Allow rock loosening

C:-Increase in-situ stress

D:-Prevent yield

Correct Answer:- Option-B

Question86:-The objective of systematic reinforcement is to :

A:-Support loose blocks only

B:-Create a self-supporting arch

C:-Reduce tunnel diameter

D:-Increase excavation speed

Correct Answer:- Option-B

Question87:-In rock-support interaction, equilibrium occurs at intersection of :

A:-Support reaction & ground characteristic curves

B:-Mohr circles

C:-Stress-strain curves

D:-Yield & failure envelope

Correct Answer:- Option-A

Question88:-Pre-reinforcement is most effective when:

A:-Installed without grout

B:-Used only in roof

C:-Installed after collapse

D:-Installed before excavation

Correct Answer:- Option-D

Question89:-According to Lang's rule, bolt length should be at least :

A:-Equal to spacing

B:-Half spacing

C:-Twice spacing

D:-Three times excavation width

Correct Answer:- Option-C

Question90:-Shotcrete primarily provides :

A:-Drainage

B:-Ventilation

C:-Internal reinforcement

D:-Surface support

Correct Answer:- Option-D

Question91:-Passive reinforcement develops load when :

A:-Rocks mass deforms

B:-Installed

C:-Blasting occurs

D:-Removed

Correct Answer:- Option-A

Question92:-Reinforcement differs from support because it :

A:-Acts externally on surface

B:-Acts from within the rock mass

C:-Uses timber sets only

D:-Is temporary

Correct Answer:- Option-B

Question93:-Support is primarily used to :

A:-Increase excavation size

B:-Mobilise inherent rock mass strength

C:-Increase drilling speed

D:-Reduce ventilation

Correct Answer:- Option-B

Question94:-The unit of Atkinson's resistance is :

A:-Ns<sup>2</sup>/m<sup>8</sup>

B:-Ns<sup>2</sup>/m<sup>4</sup>

C:-N/m<sup>2</sup>

D:-Ns/m<sup>2</sup>

Correct Answer:- Option-A

Question95:-Natural Ventilation Pressure is mainly caused by the difference in :

A:-Humidity

B:-Air velocity

C:-Temperature and density

D:-Methane percentage

Correct Answer:- Option-C

Question96:-If the quantity of air doubles, the pressure drop will increase by :

A:-2 times

B:-3 times

C:-4 times

D:-8 times

Correct Answer:- Option-C

Question97:-The minimum percentage of oxygen required in mine air is :

A:-18%

B:-19%

C:-20.93%

D:-22%

Correct Answer:- Option-B

Question98:-Equivalent orifice is used to determine :

A:-Air velocity

B:-Fan efficiency

C:-Mine resistance

D:-Humidity

Correct Answer:- Option-C

Question99:-The instrument used for measuring mine air pressure difference is :

A:-Kata thermometer

B:-Anemometer

C:-Manometer

D:-Hygrometer

Correct Answer:- Option-C

Question100:-The explosive range of methane in air is approximately :

A:-1-5%

B:-5-15%

C:-10-20%

D:-15-25%

Correct Answer:- Option-B