

GAT NDA FLT 1

ENGLISH

Synonyms

Each of the questions below consists of a word printed boldly, followed by four words or phrases numbered (a) to (d). Choose the numbered word or phrase which is most nearly similar in meaning to the word printed boldly.

Q1) All these items have been **marked down**.

- a) reserved
- b) packed up
- c) reduced in price
- d) entered

Q2) How can you have the **effrontery** to ask for another loan?

- a) right
- b) impudence
- c) heart
- d) courage

Q3) There was a **devastating** attack on his work.

- a) terrible
- b) casual
- c) unethical
- d) motivated

Q4) The committee conducted an **exhaustive** inquiry.

- a) time-consuming
- b) complicated
- c) renewed
- d) thorough

Q5) He is just **laying up** a lot of trouble for himself.

- a) clearing
- b) accumulating
- c) accepting
- d) removing

Q6) He fought the demon with all his **might**.

- a) heaviness
- b) strength
- c) density
- d) popularity

Q7) Devotees believe that God **dwells** in their heart.

- a) lives
- b) insists
- c) travels
- d) enters

Q8) Not everyone can **respond** to a difficult question quickly.

- a) discuss
- b) argue
- c) answer
- d) deny

Q9) The sage did not want to be bothered with **mundane** concerns.

- a) worldly
- b) meaningless
- c) trivial
- d) superfluous

Q10) One who rules with unlimited power is called a **dictator**.

- a) anarchist
- b) autocrat
- c) egoist
- d) sycophant

Antonyms

Find out the **MOST OPPOSITE** word for the underlined words.

Q11) His request had been rejected as a bottle seemed **imminent** and every move was essential.

- a) nearing
- b) approaching
- c) distant
- d) away

Q12) The exploration and colonization of space present **exciting** opportunities for scientific advancement.

- a) tedious
- b) ordinary
- c) thrilling
- d) laden

Q13) The connection is cut off and that part becomes **numb**.

- a) lively
- b) responsive
- c) sensitive
- d) active

Q14) Our body requires Oxygen and needs to **discard** the Carbon dioxide.

- a) keep
- b) allow
- c) shed
- d) welcome

Q15) We obtain more of oxygen and **gurge** ourselves of the excess carbon dioxide.

- a) purify
- b) beautify
- c) taint
- d) defile

Q16) Our body is undoubtedly by the far the **grandest** machine ever built by God.

- a) wisest
- b) simplest
- c) loftiest
- d) moderate

Q17) One of us spends every moment of our lives with this **exquisite** masterpiece of nature.

- a) dainty
- b) unrefined
- c) ugly
- d) fine

Q18) We are also familiar with this piece of **ingenuity**.

- a) innocent
- b) sly
- c) stupidity
- d) cunning

Q19) An old man drawing his tattered cloak closer to shield his body from the cold and **biting** wind.

- a) bitter
- b) nice
- c) pleasant
- d) mild

Q20) Soon it becomes an **obsession**.

- a) interest
- b) passion
- c) indifference
- d) pressure

Idioms & Phrases

Directions: Given below are some idioms/phrases followed by four alternative meanings to each. Choose the response (a), (b), (c) or (d), whichever is most

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appropriate expression and mark your response in your answer sheet accordingly.

Q21) Out of the woods

- a) Deliberately and without emotion b) Out of the forest
c) Out of control d) Out of danger

Q22) Call a spade a spade

- a) An important person b) Blunt and direct
c) In a state where one does not know what to do
d) To tackle a problem in a bold and direct fashion

Q23) At daggers drawn

- a) Bitterly hostile
b) To tackle a problem in a bold and direct fashion
c) Keep one at a distance
d) Have a secret plan in reserve

Q24) Bark up the wrong tree

- a) Confess – especially when a person has done a wrong thing
b) Accuse or denounce a person
c) Waste one's efforts by pursuing the wrong thing or path
d) To act foolishly or inconsistently

Q25) At one's wit's end

- a) Completely puzzled or perplexed b) Tired
c) Work or study hard d) Without hope

Q26) Have a card up one's sleeve

- a) Do or say the exact thing
b) To make a supreme effort
c) To act foolishly or inconsistently
d) Have a secret plan in reserve

Q27) Cock and bull story

- a) Ask for the impossible
b) Made up story that one should not believe
c) Just at the last moment
d) Talent for speaking

Q28) Take a leaf out of one's book

- a) Just at the last moment b) Make money unfairly
c) Desert one in difficulties d) Imitate one

Q29) Smell a rat

- a) Suspect something foul b) Disturb the work
c) Understand the hidden meaning d) Run away

Q30) Bury the hatchet

- a) Dwell on the same subject
b) Destroy in the early stage
c) End the quarrel and make peace
d) Put or do things in the wrong order

Close Comprehension

In the following passage, there are blanks, each of which has been numbered. Find out the appropriate word/phrase in each case.

The debate in India has (1) _____ on domestic-demand led growth not just as a short-run response to COVID-19, but as a medium-term growth strategy. All the _____ (2) _____ across the world and in India has shown that rapid and sustained economic growth requires export dynamism. India's GDP growth of over 6 per cent after 1991 was associated with real export growth of about 11 per cent. Pre-1991, a 3.5 per cent growth rate was associated with export growth of about 4.3 per cent. There is no known model of domestic demand/consumption-led growth, anywhere or at any time, that has _____ (3) _____ quick, sustained, and high (say 6 plus) rates of economic growth for developing countries. But even leaving aside the desirability of exports over domestic demand led growth, how _____ (4) _____ is the latter today? Policies that could _____ (5) _____ this are: More public spending, tax cuts to boost private consumption and private investment, and/or financial sector reform to boost private investment.

- Q31) a) Focused b) Maligned
c) Bleached d) Deemed

- Q32) a) Eagerness b) Nicety
c) Hovering d) Evidence

- Q33) a) Rendered b) Cessed
c) Delivered d) Conceived

- Q34) a) Factious b) Feasible
c) Vacillated d) Sustained

- Q35) a) Achieve b) Borrow
c) Amend d) Revive

Fill in the Blanks

Q36) Pets are good _____ for lonely people.
a) Aguides b) nurses c) substitutes d) companions

Q37) It is the duty of every Indian to _____ communal harmony.
a) Present b) repair c) maintain d) release

Q38) They _____ like bitter enemies but soon make up.
a) tumult b) quarrel c) conflict d) uproar

Q39) Everyone was amazed _____ the young child's courage.
a) on b) at c) in d) of

Q40) Swami Dayanand _____ the Arya Samaj.

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a) Invented b) developed c) founded d) discovered

Spotting Error

Q41) When I heard (A) / footsteps behind me I was scared (B) / I would attacked. (C) / No error (D)

Q42) In our house, we have many rooms; (A) / several of which (B) / have not been in use for years. (C) / No error (D)

Q43) The time the concert ended, (A) / the crowd clapped and cheered (B) / enthusiastically. (C) / No error (D)

Q44) A vast number (A) / of people greeted (B) / the film star on his arrival at the airport. (C) / No error (D)

Q45) The weather is (A) / much more warmer (B) / than it was a few days ago. (C) / No error (D)

Q46) When he found out that the girl had escaped (A) / he was absolute (B) / irritated and furious. (C) / No error (D)

Q47) As they watched the football match (A) / the huge crowd (B) / chant in unison. (C) / No error (D)

Q48) As a teenager Monica Seles had (A) / often beat Steffi Graf (B) / at the French open. (C) / No error (D)

Q49) Hritik along with his family (A) / are visiting (B) / the prince of Wales museum day after tomorrow. (C) / No error (D)

Q50) These reports have deterred some (A) / women to have (B) / the operation. (C) / No error (D)

GENERAL KNOWLEDGE

Q51) The climate of India is mainly tropical because:

- Of the location of the Himalayas in its North
- Major part of India lies within the tropics
- Of the overpowering influence of India Ocean
- Of the seasonal influence of jet streams

Q52) The two volcanic islands in the Indian territory are:

- Kavaratti and New Moor
- Bitra and Kavaratti
- Pamban and Barren
- Narcondam and Barren

Q53) Duncan Passage is situated between:

- Minicoy and Amindiv
- Minicoy and Maldives
- Little Andaman and Car Nicobar
- South Andaman and Little Andaman

Q54) Which one of the following States shares boundaries with the maximum number of other States of India?

- Madhya Pradesh
- Maharashtra
- Assam
- Bihar

Q55) Which one of the following is the correct sequence of the age of formation from the youngest to the oldest of the given mountain ranges?

- Himalayas, Vindhyas, Western Ghats, Deccan Traps
- Deccan Traps, Western Ghats, Vindhyas, Himalayas
- Himalayas, Western Ghats, Vindhyas, Deccan Traps
- Vindhyas, Himalayas, Deccan Traps, Western Ghats

Q56) Match the following:

A. Pir Panjal	1. Arunachal Pradesh
B. Dhauladhar	2. Uttarakhand
C. Nag Tibba	3. Jammu and Kashmir
D. Mishmi Hills	4. Himachal Pradesh

A B C D

- 4 3 1 2
- 3 4 2 1
- 3 4 1 2
- 4 3 2 1

Q57) Palghat joins which of the following states?

- Sikkim and West Bengal
- Maharashtra and Gujarat
- Kerala and Tamil Nadu
- Arunachal Pradesh and Sikkim

Q58) Match the following:

Town	River Nearer to it
A. Betul	1. Indravati
B. Jagdalpur	2. Narmada
C. Jabalpur	3. Shipra
D. Ujjain	4. Tapti

A B C D

- 1 4 2 3
- 4 1 2 3
- 4 1 3 2
- 1 4 3 2

Q59) Which of the following are true in respect of alluvial soil?

- Generally confined to river basins
 - It has been deposited by rivers
 - It is rich in phosphorus and poor in potash
 - It is the most fertile soil
- I and II
 - III and IV
 - I, II and IV
 - I, II and III

Q60) Which one of the following pairs is not correctly matched?

- Railway Zone & Headquarters
- North Eastern Railway : Gorakhpur

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- b) South Eastern Railway :Bhubaneswar
c) Eastern Railway : Kolkata
d) South East Central Railway :Bilaspur

Q61) Stalactite, Stalagmite, and Pillars are the depositional landforms of:

- a) running water b) wind
c) glacier d) underground water

Q62) Which one of the following is a major plate?

- a) Pacific Plate b) Cocos Plate
c) Arabian Plate d) Philippine Plate

Q63) Which one of the following ocean currents is a cold current?

- a) South Atlantic Drift b) Mozambique Current
c) East Australian Current d) Caribbean Current

Q64) Which one of the following sedimentary rocks are organically formed?

- a) Shale b) Chert c) Halite d) Chalk

Q65) Which one of the following is a local wind that blows out from Siberia?

- a) Bora b) Buran c) Mistral d) Blizzard

Q66) Megasthenes was a –

- a) Greek ambassador to the court of Chandragupta Maurya
b) Greek trader during Ashoka's time
c) Greek trader in the Gupta period
d) Chinese pilgrim during Harsha's time

Q67) Who among the following travellers was from Italy and visited the Vijayanagar Kingdom in the fifteenth century?

- a) Nikitin b) Fa-Hien c) Bernier d) Nicolo Conti

Q68) In the Mesopotamian records, which one of the following terms was used for the Indus Valley (Harappans)?

- a) Dilmun b) Meluhha c) Magan d) Paraka

Q69) Ashoka's connection with Buddhism is evident from which one of the following edicts -

- a) Major Rock Edict – XIII b) Rock Edict – VI
c) Minor Rock Edict – I d) Pillar Edict – IV

Q70) Consider the following statements regarding the Magadha dynasties chronology:

- 1) Ajatashatru 2) Shounaga 3) Bimbisara
4) Udayin 5) Kalasoka

Arrange the above five dynasties in order of their chronology, i.e. from old to new?

- a) 1-2-5-4-3 b) 3-1-4-2-5

- c) 3-4-1-5-2

- d) 1-3-4-2-5

Q71) Which one of the following was not a Chishti Sufi saint?

- a) Khwaja Moinuddin
b) Baba Fariduddin Ganj-i-Shakar
c) Nizamuddin Auliya d) Shaikh Bahauddin Zakariya

Q72) Arrange the following inventions in the field of the Cotton Industry in chronological order (starting with the earliest):

- 1) James Hargreaves's Spinning Jenny
2) John Kay's Flying Shuttle
3) Samuel Crompton's Mule
4) Richard Arkwright's Water Frame

Select the correct answer using the code given below:

- a) 1,3,4,2 b) 2,1,4,3 c) 4,1,3,2 d) 2,4,1,3

Q73) Although used earlier by French and German writers, the term 'Industrial Revolution' in English was first popularized by

- a) Adam Smith b) Arnold Toynbee
c) James Mill d) Bertrand Russell

Q74) The ruins of Vijayanagara (Hampi) were brought to public light in the year 1800 by the following British surveyor and engineer.

- a) James Prinsep b) Colin Mackenzie
c) James Rennell d) Charles Metcalfe

Q75) Which one of the following pairs of travellers and their nationality is not correctly matched?

- a) Ibn Battuta – Moroccan
b) Duarte Barbosa – Portuguese
c) Jean Baptiste Tavernier – Dutch
d) Niccolo Manucci – Venetian

Q76) Who among the following died in exile?

- a) Rani Laxmibai b) Bahadur Shah Zafar
c) Tantia Tope d) Nana Sahib

Q77) Who among the following is/was associated with "Maharashtra Andhashradhanimoolan Samiti"?

- a) Chandi Prasad Bhatt b) Narendrabhojkar
c) G.D. Agrawal d) Kailash Satyarthi

Q78) Who among the following was associated with the Gudam-Rampa Rebellion?

- a) Birsamunda b) Kushalkonwar
c) Alluri Sitarama Raju d) Mangal Pandey

Q79) Who among the following was associated with the Hindustan Socialist Republican Association?

- a) Subhash Chandra Bose b) Mahatma Gandhi
c) Bhagat Singh d) Laxmi Sehgal

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Q80) Who among the following was the first Indian to qualify for the Indian Civil Service?

- a) Satyendranath Tagore b) Surendranath Banerjee
c) R.C. Dutt d) Subhas Chandra Bose

Q81) The system of judicial review originated in

- a) Germany b) India c) Russia d) U.S.A.

Q82) Which of the given legislation gives constitutional status to three-tier Panchayati Raj system –

- a) 73rd constitutional amendment, 1992
b) 72nd constitutional amendment, 1992
c) 74th constitutional amendment, 1993
d) 75th constitutional amendment, 1994

Q83) The 1st State in India to implement Panchayati Raj System was

- a) Rajasthan b) Punjab c) Gujarat d) Uttar Pradesh

Q84) Which of the following article empowers the President to call for joint sitting of both houses?

- a) Art 102 b) Art 101 c) Art 108 d) Art 110

Q85) All doubts & disputes in connection with election of the President are inquired into & decided by _____

- a) The Supreme Court b) The Election Commission
c) The Parliament d) Prime Minister

Q86) The Balwant Rai Mehta Committee was related with—

- a) Banking Reforms b) Industrial Policy
c) Panchayati Raj d) Center-State relations

Q87) In which year Dogri language was included in the eighth Schedule of Indian Constitution?

- a) 2001 b) 2002 c) 2003 d) 2004

Q88) In which case the Supreme Court laid down the doctrine of 'Basic Structure'?

- a) Indira Nehru Gandhi case b) Minerva Mills case
c) Central Coal Fields Ltd. Case
d) Kesavananda Bharati case

Q89) Which of the following was the first Speaker of Lok Sabha?

- a) V.V. Giri b) Dr. Rajendra Prasad
c) B.D. Jatti d) G.V. Mavalankar

Q90) The 73rd Constitutional Amendment Act does not apply to which of the following states?

1. Nagaland 2. Meghalaya 3. Mizoram
4. Madhya Pradesh

Select the correct option from the codes given below:

- a) Only 1 & 2 b) Only 2 & 3
c) Only 1, 2 & 3 d) 1, 2, 3 & 4

Q91) What is 'Acinetobacter baumannii', which was seen in the news?

- a) Cryptocurrency b) Malware
c) Bacteria d) Animal species

Q92) Which among the following is the first ever military fighter exercise with Malaysian Air Force?

- a) Eishche Garuda b) Ex Pitch Black
c) Ex Udara Shakti d) Ex Eastern Bridge

Q93) Who among the following was appointed as 29th Chief of Army Staff?

- a) Shri Vijay Kumar Singh b) General Anil Chauhan
c) General Mahesh Pandey d) Shri Giridhara Babane

Q94) Which among the following is the first indigenously built Aircraft carrier of Indian Navy?

- a) INS Vikramaditya b) INS Vikrant
c) INS Vishal d) INS Arisht

Q95) Recently ISRO has signed a MoU with which private company for encouraging entrepreneurs for start-ups and SMEs in the space industry?

- a) Northrop Grumman Corporation b) Astra Space
c) Blue Origin d) Social Alpha

Q96) Which country is the host of the 'Multilateral Naval Exercise Komodo'?

- a) Indonesia b) Myanmar c) Nepal d) Bangladesh

Q97) Hornbill festival is a modern-day cultural extravaganza of which tribe?

- a) Gonds b) Bhils c) Nagas d) Santhals

Q98) An 'Integrated Command and Control Centre' has been set up in which city under Smart City Mission?

- a) Srinagar b) Kolkata c) Ladakh d) Itanagar

Q99) Mars Express is a spacecraft launched by which space agency?

- a) NASA b) ESA c) JAXA d) ISRO

Q100) As per the India Rankings 2023, which institution retained its first position in the Overall category?

- a) IISc Bengaluru b) IIT Madras
c) Anna University d) IIT Kharagpur

SCIENCE

Q101) What will be the molality of the solution containing 18.25 g of HCl gas in 500 g of water?

- a) 0.2 m b) 1 M c) 0.5 m d) 1 m

Q102) Law of chemical combination says:

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- a) The total mass of reactants equals the total mass of products.
 b) A compound always has its constituent in a fixed proportion.
 c) A reaction happens only if there is the liberation of energy.
 d) Both a and b.

Q103) Which of the following are true for an element?

- (i) Atomic number = number of protons = number of electrons
 (ii) Mass number = number of protons + number of neutrons
 (iii) Atomic mass = number of protons + number of neutrons
 (iv) Atomic number = number of protons = number of electrons
 a) (i) and (ii) b) (i) and (iii)
 c) (ii) and (iii) d) (iii) and (iv)

Q104) "O₃" is a chemical formula of

- a) oxygen b) oxides c) ozone d) acid rain

Q105) Dalton's model of atom states that an atom is

- a) very small b) hard sphere
 c) indivisible d) all of above

Q106) Age of a tree is determined using radio-isotope of

- a) Carbon b) Cobalt c) Iodine d) Phosphorus

Q107) The thermo-nuclear reaction converts hydrogen into

- a) oxygen b) helium c) Uranium d) barium

Q108) Diamond is not a good conductor of electricity because

- a) It is very hard b) Its structure is very compact
 c) It is not soluble in water
 d) It has no free electrons to conduct electric current.

Q109) John Dalton carried out his experiment about atom in

- a) 1808 b) 1809 c) 1708 d) 1608

Q110) The chemical formula of caustic potash is

- a) NaOH b) Ca(OH)₂ c) NH₄OH d) KOH

Q111) The function of quick lime in soda lime mixture is to

- a) Absorb moisture present in soda lime
 b) Increase the efficiency of soda lime
 c) Increase the pH of soda lime
 d) Take part in reaction with NaOH

Q112) Which of the following is taken orally as medicine in the case of hyperacidity to get relief?

- a) Sodium hydroxide b) Calcium hydroxide
 c) Milk of sodium d) Milk of magnesia

Q113) The respiratory gases that are present in plasma are

- a) Helium and oxygen b) Nitrogen and oxygen
 c) Oxygen and carbon dioxide
 d) Hydrogen and oxygen

Q114) Which of the following protects brain from mechanical shock?

- a) White matter b) Grey matter
 c) Dark fluid d) Cerebrospinal fluid

Q115) Which of the following is the scientific name of Vitamin C?

- a) Ascorbic acid b) Phylloquinone
 c) Retinol d) Pantothenic Acid

Q116) A plant that has seeds but no flowers and fruits?

- a) Bryophytes b) Gymnosperms
 c) Mosses d) Pteridophytes

Q117) Plants having vascular tissue without seeds

- a) Angiosperm b) Pteridophytes
 c) Bryophytes d) Gymnosperms

Q118) Which of the following organelle is not present in an animal cell?

- a) Ribosome b) Plastid c) Mitochondria d) Nucleus

Q119) Plant cell wall is mainly composed of

- a) Cellulose b) Lipid c) Protein d) Sugar

Q120) Starting at the superior and inferior vena cavae, in what order does a drop of blood pass through the heart structures?

- 1) left ventricle
 - 2) right ventricle
 - 3) left atrium
 - 4) right atrium
 - 5) bicuspid valve
 - 6) tricuspid valve
 - 7) pulmonary arteries
 - 8) pulmonary veins
 - 9) aorta
- a) 4, 6, 2, 7, 8, 3, 5, 1, 9 b) 1, 3, 5, 7, 9
 c) 9, 8, 7, 6, 5, 4, 3, 2, 1 d) 3, 1, 5, 4, 6, 7, 8

Q121) What does Axial Skeleton consists of

- a) Skull b) Vertebral Column
 c) Ribs and Sternum d) All of the above

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Q112) What is the function of Bile juice secreted by Liver?

- a) It makes the food alkaline.
- b) It makes the food acidic.
- c) It breaks down the food.
- d) None of the above.

Q113) What is the Function of Hydrochloric Acid?

- (i) It makes pepsin enzyme effective
- (ii) It kills bacteria which may enter in stomach with food.

Which of the following statements is/are correct?

- a) Only (i)
- b) Only (ii)
- c) Both (i) and (ii)
- d) Neither (i) nor (ii)

Q114) What should be the complementary strand of 3'...ATGGCTTGA...3'?

- a) 3'...TACCGAACT...5'
- b) 5'...TACCGAACT...3'
- c) 3'...TAGGCAAGT...5'
- d) 5'...TAGGCAAGT...3'

Q115) The transfer of pollen from one flower to another is achieved by

- a) wind
- b) water
- c) animal
- d) all of the above

Q116) A bullet of mass 20g is fired in the horizontal direction with a velocity 150 m/s from a pistol of mass 1 kg. Recoil velocity of pistol is

- a) 3m/s
- b) 4m/s
- c) 300m/s
- d) 1/3 m/s

Q117) A person is standing in an elevator. In which situation he find his weight less?

- a) When the elevator moves upwards with constant accⁿ
- b) When the elevator moves downward with constant acceleration
- c) When the elevator moves upward with uniform velocity
- d) When the elevator moves downward with uniform velocity

Q118) A man of mass 75 kg is standing in an elevator which is moving with an accⁿ of 5 m/s^2 in upward direction. The apparent weight of the man will be ($g = 10 \text{ m/s}^2$).

- a) 1125 N
- b) 1375 N
- c) 1250 N
- d) 1425 N

Q119) Let us consider a copper wire of radius r and length l . Let its resistance be R . If the radius of another copper wire is $2r$ and length $l/2$, then the resistance of this wire will be

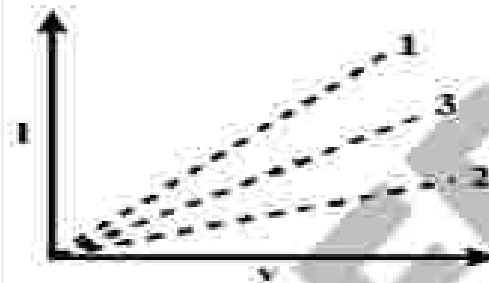
- a) R
- b) $2R$
- c) $R/4$
- d) $R/8$

Q120) A copper wire of radius r & length l has a resistance of R . A second copper wire with radius and length l is taken and the two wire are joined in parallel

combination. The resultant resistance of parallel combination of two wire will be

- a) $5R$
- b) $5/4R$
- c) $4/5R$
- d) $R/5$

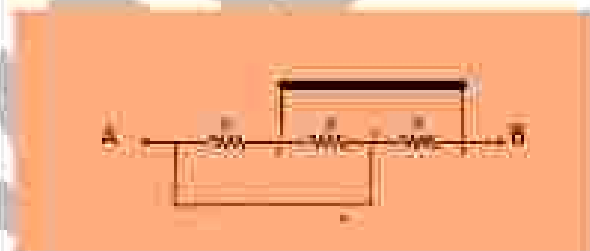
Q131) The graph between current 'I' and voltage 'V' for three linear resistors 1, 2 and 3 is given below.



If R_1 , R_2 , and R_3 are the three resistances of these resistors then which one of the following is correct

- a) $R_1 > R_2 > R_3$
- b) $R_1 < R_2 < R_3$
- c) $R_2 < R_1 < R_3$
- d) $R_2 > R_3 > R_1$

Q132) Find the equivalent resistance between the circuit



- a) $3R$
- b) $R/3$
- c) $2R/3$
- d) R

Q133) Find the resistance between A & B of the circuit



- a) 2Ω
- b) 4Ω
- c) 6Ω
- d) 10Ω

Q134) Two balls are thrown simultaneously A vertically upward with a speed of 20m/s from the ground and B vertically downward from a height of 40m with same speed and along the same line of action. At what point do the two ball collide

- a) 10m
- b) 15.1m
- c) 20m
- d) 25m

Q135) A bullet fired into a fixed target loses half of its velocity after penetrating 3cm. How much further will it penetrate before coming to rest.

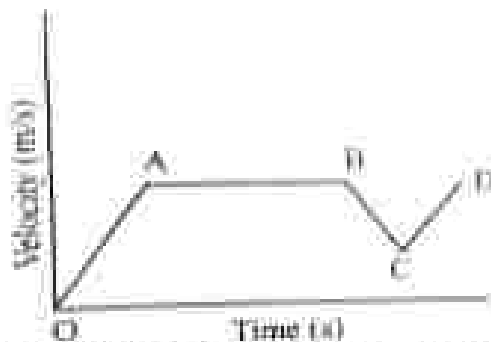
- a) 2cm
- b) 4cm
- c) 1cm
- d) 5cm

Q136) A car moving with speed of 50 km/h can be stopped by brakes after at least 5m. If the same car is moving at a speed of 100 km/h. The minimum stopping distance is

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- a) 20m b) 12m c) 24m d) 6m

Q137) The following graph represents the velocity-time graph of a moving car on a road



Which segment of the graph represent the retardation.
a) AB b) BC c) CD d) None

Q138) A bomb of mass 9kg explodes into two parts in at rest initially, one part of mass 3kg moves with velocity of 16 m/s, then the K.E of other part will be:

- a) 162 J b) 150 J c) 192 J d) 200 J

Q139) If the linear momentum is increased by 20% what will be % change in K.E of the body

- a) 10% b) 20% c) 30% d) 44%

Q140) A body moved along straight line by delivering constant power, the distance moved by the body in time 't' is proportional to

- a) $t^{1/2}$ b) $t^{2/3}$ c) $t^{3/2}$ d) t^2

Q141) Power required by a boy of mass 30kg to run up a staircase of 40 step in 30 sec is (height of each step is 15 cm $g = 10 \text{ m/s}^2$)

- a) 1800W b) 180W c) 28000 W d) 18 W

Q142) A planet has a mass M_1 has radius R_1 . The value of acc^0 due to gravity on its surface is g_1 . There is another planet 2, whose mass and radius both are two times of the first planet, which one of the following is the acc^0 due to gravity on the surface of planet 2.

- a) g_1 b) $2g_1$ c) $g_1/4$ d) $g_1/2$

Q143) The escape velocity of a body on the surface of earth is 11.2 km/s. If the earth mass increases to twice its present value and radius becomes half the radius of earth. Then escape velocity will become

- a) 3.6 km/s b) 11.2 km/s c) 22.4 km/s d) None

Q144) Two planets of radii in the ratio of 2:3 are made from material of density in the ratio of 3:2 then the ratio of acc^0 due to gravity g_1/g_2 at the surface of two planets will be

- a) 1 b) 2/25 c) 4/9 d) 0.12

Q145) An object is placed at a distance of 40 cm on the principal axis of a concave mirror of radius of curvature 30 cm. By how much does the image move if the object is shifted towards the mirror through 15cm.

- a) -37.5 cm b) -13.5 cm c) 20.5 d) None

Q146) Two plane mirror are inclined to each other at an angle of 50° . A point object is placed in between them. The total number of images produced by both mirror.

- a) 2 b) 4 c) 5 d) 6

Q147) The principle of working of periscope is based on

- a) Only reflection b) Only refraction
c) Both reflection and refraction
d) Both reflection and interference

Q148) The time-period of a simple pendulum made by a thin copper wire of length L is T . If the temperature of the room in which this simple pendulum is placed is increased by 30°C . What will be the effect on time period of the pendulum.

- a) T will increases slightly b) T will decreases slightly
c) T will remain same d) None

Q149) If the length of pendulum increases by 3%. What is the % change in Time-period

- a) 1% b) 2% c) 1.5% d) 0.5%

Q150) X-rays are electromagnetic radiation whose wavelengths are of the order of

- a) 1m b) 10^{-2} c) 10^{-4} d) 10^{-10}