



**CBRT - 2019
Question Paper Grid**

Government of Goa

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College Director of Physical Edu.

Itemcode : **DI1016**

Q1 : Spot the error in the following sentence. The Alphabet of that Part (containing the error) is your answer.

- (a) What to talk of charity
- (b) Rajan does not practise
- (c) even
- (d) ordinary humanity

Key: **A**

Itemcode : **DI1017**

Q2 : Spot the error in the following sentence. The Alphabet of that Part (containing the error) is your answer.

- (a) No King in that period
- (b) was so intensely involved
- (c) in the welfare of his people
- (d) as King Ashoka

Key: **A**

Itemcode : **DI1018**

Q3 : Fill in the blank with the correct preposition.
I am not obsessed _____ such ideas as you are.

- (a) in
- (b) on
- (c) for
- (d) with

Key: **D**

Itemcode : **DI1019**

Q4 : Fill in the blank with the correct preposition.
India is committed _____ a policy of peaceful existence.

- (a) for
- (b) with
- (c) to
- (d) of

Key: **C**

Itemcode : **DI1020**

Q5 : Choose the correct Antonym from the following word given.
ANTIPATHY

- (a) indifference
- (b) willingness
- (c) fondness
- (d) artificial

Key: **C**

Itemcode : **DI1021**

Q6 : Choose the correct Antonym from the following word given.
MOROSE

- (a) healthy
- (b) gloomy
- (c) haggard
- (d) cheerful

Key: **D**

Passage:

Read the following passage and answer the following questions on the basis of information provided in the passage.

Our body is a wondrous mechanism and when subjected to unusual stress over a period of time, it adapts itself to deal more effectively with that stress. So when you exert your muscles against resistance, they are forced to adapt and deal with this extraordinary workload. This is the principle of weight training. Strands of muscle fibres become thicker and stronger in response to the demands placed on them.

One of the great merits of weight training is the strength of your heart. During weight training, your heart is forced to beat faster and stronger in order to pump sufficient blood to the muscles being worked. In time, your heart, like your body will adapt to this extra workload by becoming stronger and more efficient. Since your body needs a given amount of blood to perform its daily tasks your heart will now need fewer beats to pump the same quantity of blood. Sounds good? There's more. Your entire circulatory system is given a thorough workout every time you exercise, which increases its overall efficiency. Even the neural paths from your brain's command centres to each individual muscles become more effective, enabling easier recruitment of muscle fibres for carrying out physical tasks. In essence, your body becomes a well-oiled and finely-tuned piece of machinery, whirring along without any break-down. In today's stress filled world, you need all the help you can get.

Itemcode : **DI1022**

Q7 : What is the principle training of weight lifting?

- (a) Adapting the body to muscle force
- (b) Adapting muscles to force implied on them
- (c) Disposing extra workload
- (d) Mechanised response to external conditions

Key: **B**

Itemcode : **DI1023**

Q8 : How does the heart become stronger owing to physical exercise?

- (a) Thorough acclimatisation
- (b) Naturalisation
- (c) Adapting to excessive workload
- (d) By accelerating the circulation of blood

Key: **C**

Itemcode : **DI1024**

Q9 : What does the term 'well-oiled' in the passage do note?

- (a) Healthy
- (b) Efficient
- (c) Managed
- (d) None of these

Key: **A**

Itemcode : **DI1025**

Q10 What affects the nature of muscle fibres?

:

- (a) Intensity of workload
- (b) Alimentary System
- (c) Nutrition
- (d) Stress imposed on them

Key: **D**

Itemcode : **DI1045**

Q11 Let P, Q, S, R, T, U and V represent seven distinct digits from 0 to 6, not necessarily in that order. If PQ and RS are both two digit numbers adding up to the three digit number TUV, find the value of V.

- (a) 3
- (b) 6
- (c) 5
- (d) Cannot be determined

Key: **C**

Itemcode : **DI1046**

Q12 Each one of Mr. Ugle, his mother, his wife and his son is a different professional among lawyer, doctor, engineer and accountant. The accountant is not the son of the lawyer, who is a blood relative of the doctor. The engineer is the son of the accountant who is not a blood relative of the doctor. Who can never be the doctor?

- (a) Mr. Ugle
- (b) Mr. Ugle's wife
- (c) Mr. Ugle's son
- (d) Both a & c

Key: **B**

Itemcode : **DI1047**

Q13 A and B start simultaneously from P and Q towards Q and P respectively. The speed of A and B are 25 kmph and 32 kmph respectively. They meet at R and immediately return to their respective starting points after exchanging their speeds. If the distance between P and Q is 2000 km, then the difference in time taken by A and B to reach their starting position is

- (a) 15.5 hours
- (b) 20 hours
- (c) 16 hours
- (d) 17.5 hours

Key: **D**

Itemcode : **DI1048**

Q14 Find the number of two-digit numbers that are divisible by both 6 and 7

:

- (a) 4

- (b) 3
- (c) 2
- (d) 1

Key: **C**

Itemcode : **DI1049**

Q15 The sentences given in the question, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a letter. From among the four choices given below the question, choose the most logical order of sentences that constructs a coherent paragraph.

- P. In their popular-philosophizing mode, physicists like to quote the poets Keats ("beauty is truth, truth beauty") or Blake on the subject of nature's "fearful symmetry".
- Q. From Euclid and Pythagoras down to 20th century physicists, many who explore the underlying laws of natural world have been truth and beauty as inextricable intertwined.
- R. Does science have a "beauty" problem?
- S. "Beauty is a successful criterion of selecting the right theory," the Noble Prize-winning physicist Murray Gell-Mann said in a much quoted TED talk in 2007.
- T. David Orrell, a mathematician and consultant argues that it does - or, at least, the some of its practitioners are enthralled to ideals involving "elegance", "symmetry", and "unity" that are beckoning them down false paths.

- (a) SPQRT
- (b) SQPRT
- (c) RTQSP
- (d) RSPQT

Key: **C**

Itemcode : **DI1050**

Q16 There are two blanks in the question. From the pairs of words given below each sentence choose the pair that fills the blank most appropriately.

A borrowed book is like a guest in the house; it must be treated with _____, with a certain considerate _____.

- (a) respect .. understanding
- (b) punctiliousness .. formality
- (c) propriety .. modesty
- (d) reverence .. decorum

Key: **B**

Itemcode : **DI1051**

Q17 There are two blanks in the question. From the pairs of words given below each sentence choose the pair that fills the blank most appropriately.

The government health sector in India has been on a _____ path since 2005, with substantial _____ of central government funds under the National Rural Health Mission (NRHM).

- (a) change .. mixture
- (b) modification .. combination
- (c) transformation .. blend
- (d) reform .. infusion

Key: **D**

Itemcode : **DI1054**

Q18 Clock is related to Time in the same way as Vehicle is related to which of the following?

- (a) Driver
- (b) Road
- (c) Journey
- (d) Fuel

Key: **C**

Itemcode : **DI1055**

Q19 A student received an average score of N points on her first 3 tests. If her fourth test score exceeds the average score of previous 3 tests by 20 points, then what is the average score for the four tests?

- (a) $N + 20$
- (b) $N + 10$
- (c) $N + 4$
- (d) $N + 5$

Key: **B**

Itemcode : **DI1056**

Q20 A thief running at 8 km/hr is chased by a policeman whose speed is 10 km/hr. If the thief is 100 m ahead of the policeman, then the time required for the policeman to catch the thief will be:

- (a) 2 min
- (b) 3 min
- (c) 4 min
- (d) 6 min

Key: **B**

Itemcode : **DI1057**

Q21 Which of the following situations below describes the best, as an example of 'Speculation'?

:

- (a) Francine decides that it would be appropriate to wear jeans to her new office on Friday after reading about "Casual Fridays" in her employee handbook.
- (b) Mary spends thirty minutes sitting in traffic and wishes that she took the train instead of driving.
- (c) After consulting several guidebooks and her travel agent, Jennifer feels confident that the hotel she has chosen is first-rate.
- (d) When Emily opens the door in tears, Theo guesses that she's had a death in her family.

Key: **D**

Itemcode : **DI1058**

Q22 Which situation below is the best example of 'Embellishing the Truth'?

:

- (a) Isabel goes to the theater, and the next day, she tells her coworkers she thought the play was excellent.
- (b) The realtor describes the house, which is eleven blocks away from the ocean, as prime waterfront property.
- (c) During the job interview, Fred, who has been teaching elementary school for ten years, describes himself as a very experienced teacher.
- (d) The basketball coach says it is likely that only the most talented players will get a college scholarship.

Key: **B**

Itemcode : **DI1059**

Q23 Statements: Some businessmen are fools. Some fools are rich.

: Conclusions:

I. Some businessmen are rich

II. Some rich are businessmen.

Which of the following is correct?

- (a) Only conclusion I follows
- (b) Only conclusion II follows
- (c) Either I or II follows
- (d) Neither I nor II follows

Key: **D**

Itemcode : **DI1060**

Q24 The price of a product is P. A shopkeeper raises its prices by X% and then offers a discount by Y% on the raised price.

: The discounted price again becomes P. If Y is the difference between X and Y, find Y.

- (a) 20
- (b) 25
- (c) 50
- (d) 100

Key: **C**

Itemcode : **DI1061**

Q25 If instead of multiplying a number by 6 the number was divided by 6. What should be the percentage error?

:

- (a) 100%
- (b) 96.00%
- (c) 94.00%
- (d) 98.00%

Key: **B**

Itemcode : **DI1062**

Q26 35% of 480 + 120% of 120 = _____ ?

:

- (a) 312
- (b) 222
- (c) 322
- (d) 212

Key: **A**

Itemcode : **DI1063**

Q27 The film director wants an actress for the lead role of Lucy who perfectly fits the description that appears in the original screenplay. He is not willing to consider actresses who do not resemble the character as she is described in the screenplay, no matter how talented they are. The screenplay describes Lucy as an average-sized, forty something redhead, with deep brown eyes, very fair skin, and a brilliant smile. The casting agent has four actresses in mind.

Actress #1 is a stunning red-haired beauty who is 5'9" and in her mid-twenties. Her eyes are brown and she has an olive complexion.

Actress #2 has red hair, big brown eyes, and a fair complexion. She is in her mid-forties and is 5'5".

Actress #3 is 5'4" and of medium build. She has red hair, brown eyes, and is in her early forties.

Actress #4 is a blue-eyed redhead in her early thirties. She's of very slight build and stands at 5'.

Which two actresses should the casting agent send to meet the director?

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

Key: **B**

Itemcode : **DI1064**

Q28 Three of the following four are alike in a certain way and so form a group. Which is the one that does not belong to that group?

- (a) Orange
- (b) Pear
- (c) Radish
- (d) Mango

Key: **C**

Itemcode : **DI1065**

Q29 A mixture comprises of water and liquids A and B. The volume of water is $\frac{1}{3}$ rd of the total mixture and the volume of liquids A and B are in the ratio of 5 : 3. To remove the water, the mixture is passed through a porous medium which completely absorbs the water and partially absorbs liquid A. Altogether this porous medium absorbs 200 ml of the initial mixture. If the ratio of volume of liquids A and B in the residual concentrated mixture becomes 7 : 9, then find the volume of water absorbed by the porous medium.

- (a) 60 ml
- (b) 100 ml
- (c) 80 ml
- (d) 120 ml

Key: **D**

Passage:

Answer the questions on the basis of the information given below.

Mr De Souza, a car dealer, sold cars of only two brands, A and B, in the previous year. This year, he introduced a new brand, C. The number of cars of brand A and brand B sold in the previous year were in the ratio 3 : 2, and the ratio of the number of cars sold in the previous year to that sold in this year is 2 : 3 for brand A and 2 : 5 for brand B. Further, the number of cars of brand C sold this year forms 81% of the total number of cars sold this year.

Itemcode : **DI1041**

Q30 Find the number of cars of brand C sold this year, given that a total of 24 cars of brand A were sold in the previous year.

- (a) 243
- (b) 324
- (c) 648
- (d) 162

Key: **B**

Itemcode : **DI1042**

Q31 What is the percentage increase in the total number of cars sold this year when compared to the total number of cars sold in the previous year?

- (a) 1000%
- (b) 600%
- (c) 900%
- (d) 400%

Key: **C**

Passage:

Answer the questions on the basis of the information given below.

A sports club shortlisted five persons - Andrew, Bradman, John, Whitefield and Chang. Each of them is from a different country among Australia, India, Japan, Pakistan and Canada, not necessarily in that order. At present, each of them is coaching the team of a different country among Australia, Bangladesh, China, Wales and Bermuda, not necessarily in that order. The following details were also observed about their particulars:

- (i) For any person, each of his three particulars - his name, the name of the country from which he is and the name of the country that he is coaching at present, starts with a different letter.
- (ii) Whitefield is coaching Australia and John is from neither Australia nor Pakistan.
- (iii) Bradman is not coaching China and the person who is coaching Bermuda is from Canada.
- (iv) Anshuman is neither from Canada nor from Pakistan and also the person from Pakistan is coaching Bangladesh.

Itemcode : **DI1043**

Q32 Whitefield is from which country?

:

- (a) India
- (b) Japan
- (c) Canada
- (d) Cannot be determined

Key: **D**

Itemcode : **DI1044**

Q33 Who is the person from Australia?

:

- (a) Bradman
- (b) John
- (c) Whitefield
- (d) Cannot be determined

Key: **A**

Passage:

Answer the question on the basis of information given below:

In a locality there are five buildings - A, B, C, D and E. All of them are of different heights. The tallest building has five floors, the next tallest has four floors, and so on, till the shortest has only one floor. Further it is known that:

- (i) The sum of the number of floors of A and E is equal to the sum of the number of floors of C and D.
- (ii) C is not the tallest building and A is not the shortest building
- (iii) C is taller than A and D is taller than B

Itemcode : **DI1052**

Q34 Which building is the shortest?

:

- (a) B
- (b) A
- (c) C
- (d) Either B or A

Key: **A**

Itemcode : **DI1053**

Q35 Building C has _____ floors.

:

- (a) 2
- (b) 3
- (c) 4
- (d) 5

Key: **B**

Itemcode : **DI1066**

Q36 Real Madrid won the 2018 UEFA Champions League. Who was the runner-up?

:

- (a) Juventus
- (b) Atletico Madrid
- (c) Liverpool
- (d) Manchester United

Key: **C**

Itemcode : **DI1067**

Q37 In which year, Mamata Banerjee led Trinamool Congress came to power for the first time in West Bengal?

:

- (a) 2009
- (b) 2010
- (c) 2011
- (d) 2015

Key: **C**

Itemcode : **DI1068**

Q38 As per SwachhSarvekshan 2017, _____ was declared the cleanest City in India.

:

- (a) Indore
- (b) Bhopal
- (c) Surat
- (d) Mysore

Key: **A**

Itemcode : **DI1069**

Q39 Who was the last Mughal Emperor in India?

:

- (a) Shah Alam II
- (b) Muhammad Shah Bahadur
- (c) Akbar Shah II
- (d) Bahadur Shah II

Key: **D**

Itemcode : **DI1070**

Q40 Who among the following founded Google?

:

- (a) Jack Dorsey
- (b) Jan Koum
- (c) Larry Page
- (d) Jeff Bezos

Key: **C**

Itemcode : **DI1071**

Q41 Mangalyan, the Mars Orbiting Mission by India was launched in _____ year.

:

- (a) 2013
- (b) 2014
- (c) 2015

(d) 2016

Key: **B**

Itemcode : **DI1072**

Q42 Gomant Vibhushan Award is the highest civilian honor by the Government of Goa. The last time this was given in 2016.
: Who received the award?

- (a) Laxman Pai
- (b) Lambert Mascarenhas
- (c) RA Mashelkar
- (d) Charles Correa

Key: **A**

Itemcode : **DI1074**

Q43 Who has become the World's First Female Cricketer to take 200 wickets in One Day Internationals?
:

- (a) Jhulan Goswami
- (b) Veda Krishnamu rthy
- (c) Smriti Mandhana
- (d) Neetu David

Key: **A**

Itemcode : **DI1075**

Q44 The famous 'Hornbill Festival' is held in which of the following states?
:

- (a) West Bengal
- (b) Assam
- (c) Nagaland
- (d) Kerala

Key: **C**

Itemcode : **DI1076**

Q45 Who among the following is a founder of Wikipedia
:

- (a) Ward Cunningham
- (b) Larry Sanger
- (c) Rick Gates
- (d) Bill Gates

Key: **B**

Itemcode : **DI1001**

Q46 Which Yoga is a discipline and its aim is to ensure perfect health by physical and Mental purification through control of
: mind and body?

- (a) Raj Yoga
- (b) Hatha Yoga
- (c) Mantra Yoga/Japa Yoga
- (d) Bhakti Yoga

Key: **B**

Itemcode : **DI1002**

Q47 _____ is the optimum ability to excel in physical strength, stamina, and suppleness with respect to status,
: development and maintenances.

- (a) Social health
- (b) Physical fitness
- (c) Mental health
- (d) Positive health

Key: **B**

Itemcode : **DI1003**

Q48 Which of the following is susceptible to the issue of research ethics?
:

- (a) Faulty research design
- (b) Choice of sampling techniques
- (c) Reporting of research finding
- (d) Inaccurate application of statistical technique

Key: **C**

Itemcode : **DI1004**

Q49 What is a Research Design?
:

- (a) A way of conducting research that is not grounded in theory
- (b) The choice between using qualitative or quantitative methods
- (c) The style in which you present your research finding e.g. a graph
- (d) A framework for every stage of the collection and analysis of data

Key: **D**

Itemcode : **DI1005**

Q50 Sampling Cases' means

:

- (a) Sampling using a sampling frame
- (b) Identifying people who are suitable for research
- (c) Literally the researcher's brief case
- (d) Sampling of people, newspaper, and television programmes etc.

Key: **D**

Itemcode : **DI1006**

Q51 Arrange the following step of research in correct sequence.

:

1. Identification of research problem
2. Listing of research design
3. Collection of data
4. Methodology
5. Data analysis
6. Results and discussion

- (a) 1, 2, 3, 4, 5, and 6
- (b) 1, 2, 4, 3, 5 and 6
- (c) 2, 1, 3, 4, 5 and 6
- (d) 2, 1, 4, 3, 5 and 6

Key: **B**

Itemcode : **DI1007**

Q52 What does anthropometry means?

:

- (a) Components of the body
- (b) The measurements of human body
- (c) To study growth and development
- (d) To determine body composition

Key: **B**

Itemcode : **DI1008**

Q53 Which type of exercise strengthens the skeletal muscles?

:

- (a) Endurance
- (b) Speed
- (c) Flexibility
- (d) Agility

Key: **A**

Itemcode : **DI1009**

Q54 The cardiac cycle is:

:

- (a) One heart beat where the heart is relaxed whilst filling and then contracts.
- (b) Ten heart beats where the heart is relaxed whilst filling and then contracts.
- (c) One heart beat where the heart is contracting whilst filling and then dilates.
- (d) Seventy heart beats where the heart is relaxed whilst filling and then contract

Key: **A**

Itemcode : **DI1010**

Q55 The ECG is a graphic record of:

:

- (a) Brain activity.
- (b) A measure of cardiac output.
- (c) The heart's activity.
- (d) Renal function.

Key: **C**

Itemcode : **DI1011**

Q56 In general, the higher the intensity of exercise, the greater the proportional Contribution of:

:

- (a) Aerobic energy production
- (b) Anaerobic energy production
- (c) The TCA cycle (Krebs' cycle) to the production of ATP
- (d) The electron transfer chain to the production of ATP

Key: **B**

Itemcode : **DI1012**

Q57 Which of the following is not a true statement?

:

- (a) Muscle glycogen is broken down enzymatically to glucose-1-phosphate
- (b) Elite endurance runners have a high proportion of Type I fibres in their leg muscles
- (c) Liver glycogen is important in the maintenance of the blood glucose concentration
- (d) Insulin promotes glucose uptake by all tissues in the body

Key: **D**

Itemcode : **DI1013**

Q58 What is the most common cause of knee pain in runners?

:

- (a) Diskoid meniscus
- (b) Hamstring tendinitis
- (c) Baker cyst
- (d) Patellofemoral pain syndrome

Key: **D**

Itemcode : **DI1014**

Q59 Which exercise has the greatest effect on bone formation?

:

- (a) Weight lifting
- (b) Cycling
- (c) Swimming
- (d) Tai Chi stretching

Key: **A**

Itemcode : **DI1015**

Q60 Human most easily tolerate of which of the nutrients?

:

- (a) Protein
- (b) Carbohydrates
- (c) Lipids
- (d) Calcium

Key: **B**

Itemcode : **DI1026**

Q61 Yoga is classified into three types: Meditative asana and Cultural asana are the two types, the third is ?

:

- (a) Pranayam
- (b) Relaxative Asana
- (c) Tivra-gati Asana
- (d) Purak

Key: **B**

Itemcode : **DI1027**

Q62 In the skeletal system, the function of tendons is to.

:

- (a) act as a reservoir for calcium and phosphorous.
- (b) attach bones to muscles.
- (c) act as the formation centers for cartilage.
- (d) attach ligaments to muscle fibers.

Key: **B**

Itemcode : **DI1028**

Q63 Competitive games and team sports help promote the development of positive traits and values primarily by providing opportunities in which students can:

:

- (a) study and emulate the interpersonal skills of a variety of adult role models.
- (b) compete against themselves rather than against other individuals.
- (c) remain confident and free of worries about the possibility that peers may make fun of them.
- (d) observe and practice character-building skills such as determination, loyalty, self-control, and civility.

Key: **D**

Itemcode : **DI1029**

Q64 Which of the following yogic posture can be done after a full meal ?

:

- (a) Vajrasana
- (b) Trikonasana
- (c) Halasana
- (d) Mayurasana

Key: **A**

Itemcode : **DI1030**

Q65 Dynamometer is used to measure :

:

- (a) Flexibility
- (b) Agility
- (c) Strength
- (d) Speed

Key: **C**

Itemcode : **DI1031**

Q66 In case of sprain, the immediate treatment recommended is :

:

- (a) Hydrotherapy
 - (b) Cryotherapy
 - (c) Heat therapy
 - (d) None of the above
- Key: **B**

Itemcode : **DI1032**

Q67 A test is considered to be reliable if it has :

- (a) Comparability
- (b) Continuity
- (c) Objectivity
- (d) Consistency

Key: **D**

Itemcode : **DI1033**

Q68 Increase in muscle mass due to heavy weight training is called :

- (a) Muscular Hypotrophy
- (b) Muscular Hypertrophy
- (c) Muscular Atrophy
- (d) Haematoma

Key: **B**

Itemcode : **DI1034**

Q69 The back thigh muscles are also known as :

- (a) Hamstring
- (b) Gluteal
- (c) Gastro enemius
- (d) Quadriceps

Key: **A**

Itemcode : **DI1035**

Q70 First step of Budget preparation is:

- (a) To search Income source
- (b) Estimate Expenditure
- (c) Planning
- (d) Facilities and personnel

Key: **C**

Itemcode : **DI1036**

Q71 The concept of oxygen debt was originally developed by :

- (a) Hillary Kreb
- (b) Mc Loy
- (c) A.V. Hill
- (d) W. Sheldon

Key: **A**

Itemcode : **DI1037**

Q72 An isometric muscle action is characterized by the production of force :

- (a) as a muscle lengthens due to extension of a joint.
- (b) through movement generated in opposition to the downward pull of gravity.
- (c) as a muscle shortens due to flexion of a joint.
- (d) through tension and muscle contraction without movement.

Key: **D**

Itemcode : **DI1038**

Q73 The correct racing posture of a swimmer, a cyclist, or a downhill skier minimizes the effect of :

- (a) lift
- (b) propulsion
- (c) turbulence
- (d) gravity

Key: **C**

Itemcode : **DI1039**

Q74 Steeplechase is related to the sport of :

- (a) Kho Kho
- (b) Rugby
- (c) Athletics

(d) Baseball
Key: **C**

Itemcode : **DI1040**

Q75 Which of the following rating represent the pure ectomorph individual ?
:

- (a) 7-1-1
 - (b) 1-7-1
 - (c) 1-1-7
 - (d) 6-2-2
- Key: **C**