



CBRT - 2019
Question Paper Grid

Government of Goa

17 March 2019

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Assistant Pharmaceutical Chemist

Itemcode : **CM1032**

Q1 : Fill in the blanks with the right preposition:
My best friend lives _____ M.G. Road

- (a) At
- (b) On
- (c) In
- (d) Near

Itemcode : **CM1033**

Q2 : Fill in the blanks with the right preposition:
My parents have been married _____ thirty nine years.

- (a) At
- (b) To
- (c) In
- (d) For

Itemcode : **CM1034**

Q3 : Fill in the blanks with the right preposition:
I've already heard the news. I know all ____ it.

- (a) About
- (b) Of
- (c) On
- (d) Around

Itemcode : **CM1035**

Q4 : Fill in the blanks with the right preposition:
I couldn't agree ____ what my wife said.

- (a) To
- (b) With
- (c) On
- (d) About

Itemcode : **CM1036**

Q5 : Which word does NOT belong with the others?

- (a) fair
- (b) just
- (c) equitable
- (d) favourable

Passage:

Read the passages carefully and answer the questions given below it:

July 15, 2010 turned out to be a historic day, as the Indian Rupee got the much-awaited symbol, just like other leading currencies of the world, viz Dollar, Euro, Pound Sterling and the Yen. The new symbol Rs. Is an amalgamation of Devanagari 'Ra' and the Roman 'R' without the stem. Till now, the Rupee was written in various abbreviated forms in different languages. The new symbol designed by IIT Bombay postgraduate Shri D. Udaya Kumar was approved by the Union Cabinet on July 15. "It's a big statement on the Indian currency. The symbol would lend a distinctive character and identity to the currency and further highlight the strength and global face of the Indian economy," said Information and Broadcasting Minister Smt Ambika Soni , while briefing the media on the Cabinet decision. The new symbol will not be printed or embossed on currency notes or coins, but it would be included in the 'Unicode Standard' to ensure that it is easily displayed and printed in the electronic and print media. The encoding of the rupee symbol in the Indian Standards is estimated to take about six months while encoding in the Unicode and ISO/IEC 10646 will take about 18 months to two years. It will also be incorporated in software packages and keyboards for use in India. On March 5, 2009 the Government announced a contest to create a symbol for the Rupee, inviting entries for the symbol, which would reflect and capture the Indian ethos and culture. Over 3000 entries were received, which were evaluated by a jury headed by the Deputy Governor, RBI, which also included experts from three reputed art and design institutes. The Jury selected five entries and also gave its evaluation of these five entries to the Government to take a final decision. ShriUdaya Kumar's entry was the 'Best of Five' He will get an award of Rs. 2.5 lakh and more than that an incredible fame, as the designer of the Rupee symbol. "My design is a perfect blend of Indian and Roman letters capital 'R' and Devanagri 'Ra' which represents rupaiah, to appeal to international and Indian audiences. It is based on the tricolour, with two lines at the top and white space in between," a visibly-happy Kumar said. The genesis of the word 'rupee' is in the Sanskrit word 'raupya' which means silver. Indian Rupee is variously called 'rupaya' in

Hindi, 'rupiya' in Gujarati, 'roopayi' in Telugu and Kannada, 'rubai' in Tamil and 'rupyakam' in Sanskrit. However in Eastern India it is called 'Taka/Toka' in Bengali and Assamese and 'Tanka' in Oriya. India stands among the earliest to issue coin, and as a result it has seen a wide range of monetary units throughout its history. There is some historical evidence to show that coins may have been introduced the first time some time between 2500 and 1750 BC.

Itemcode : **CM1037**

Q6 : Who is the Union Information and Broadcasting Minister?

- (a) Smt Sushma Swaraj
- (b) Smt Meera Kumar
- (c) Smt Pratibha Devisingh Patil
- (d) Smt Ambika Soni

Itemcode : **CM1038**

Q7 : What is the importance of 15 July in the history of Indian rupee?

- (a) The new Rupee symbol replaced the old.
- (b) The international community approved the Rupee symbol.
- (c) The Cabinet approved the much-awaited Rupee symbol.
- (d) Both A and C

Itemcode : **CM1039**

Q8 : Which of the following countries has a currency symbol?

- (a) China
- (b) France
- (c) Singapore
- (d) Not mentioned in the passage

Itemcode : **CM1040**

Q9 : Who has designed the newly approved Rupee symbol?

- (a) A teacher posted at IIT Bombay
- (b) Mr. Uday Kumar of Maharashtra
- (c) Mr. D Uday Kumar, a postgraduate
- (d) Information and Broadcasting Minister

Itemcode : **CM1041**

Q10 The new design 'Rs.' finds its origin in

:

- (a) Devanagari
- (b) Roman
- (c) Devanagari and Sanskrit
- (d) Devanagari and Roman

Itemcode : **CM1042**

Q11 Look at this series: 8, 43, 11, 41, __, 39, 17, What number should fill in the blank?

:

- (a) 8
- (b) 14
- (c) 43
- (d) 44

Itemcode : **CM1043**

Q12 Look at this series: U32, V29, __, X23, Y20. What number should fill the blank?

:

- (a) W26
- (b) W17
- (c) Z17
- (d) Z26

Itemcode : **CM1044**

Q13 Look at this series: V, VIII, XI, XIV, __, XX. What number should fill the blank?

:

- (a) IX
- (b) XXIII
- (c) XV
- (d) XVII

Itemcode : **CM1045**

Q14 JAK KBL LCM MDN _____

:

- (a) OEP
- (b) NEO
- (c) MEN
- (d) PFQ

Itemcode : **CM1046**

Q15 Exercise is to gym as eating is to
:

- (a) Food.
- (b) Dieting.
- (c) Fitness.
- (d) Restaurant.

Itemcode : **CM1047**

Q16 Odometer is to mileage as compass is to
:

- (a) Speed.
- (b) Hiking.
- (c) Needle.
- (d) Direction

Itemcode : **CM1048**

Q17 Choose the pair that best represents a similar relationship to the one expressed in the original pair of words:
:

PSYCHOLOGIST : NEUROSIS

- (a) Ophthalmologist : Cataract
- (b) Dermatologist : Fracture
- (c) Rash : Orthopedist
- (d) Oncologist : Measles

Itemcode : **CM1049**

Q18 Here are some words translated from an artificial language.

- : i. granamelke means big tree
ii. pinimelke means little tree
iii. melkehoon means tree house
Which word could mean "big house"?

- (a) Granahoon
- (b) Pinishur
- (c) Pinihoon
- (d) Melkegrana

Itemcode : **CM1050**

Q19 Find the odd one: Paris, London, Seoul, Shanghai

:

- (a) Paris
- (b) London
- (c) Seoul
- (d) Shanghai

Itemcode : **CM1061**

Q20 Divya while introducing Ravi to her husband said "His brother's father is the only son of my grandfather". How is Divya
: related to Ravi?

- (a) Aunt
- (b) Sister
- (c) Niece
- (d) Mother

Itemcode : **CM1051**

Q21 Vijay Diwas is celebrated on:

:

- (a) 26th January
- (b) 26th May
- (c) 26th July
- (d) 16th December

Itemcode : **CM1052**

Q22 Who is the Father of the White Revolution?

:

- (a) VergheseKurien
- (b) Dr.VenugopalAiyar
- (c) Dr.SarvepalliRadhakrishnan
- (d) A.K. Antony

Itemcode : **CM1053**

Q23 The name of the autobiography written by Dr. APJ Abdul Kalam is:

:

- (a) Ignited Minds: Unleashing the Power within India
- (b) Wings of Fire
- (c) Guiding Souls: Dialogues on the Purpose of Life
- (d) You Are Born to Blossom: Take My Journey Beyond

Itemcode : **CM1054**

Q24 Where does the Prime Minister of India hoist the national tricolour on Independence Day?

:

- (a) Agra Fort
- (b) Red Fort
- (c) Rashtrapati Bhavan
- (d) Parliament House

Itemcode : **CM1055**

Q25 Who composed the lyrics of the song, VandeMataram?

:

- (a) Subhash Chandra Bose
- (b) Bankim Chandra Chattopadhyay
- (c) Rabindranath Tagore
- (d) Aurobindo Ghose

Itemcode : **CM1056**

Q26 Name the first indigenous nuclear submarine built by India

:

- (a) Aridhaman
- (b) Vikramaditya
- (c) Virat
- (d) Arihant

Itemcode : **CM1057**

Q27 The vehicle that the Indian Space Research Organisation (ISRO) is developing to launch a two-person crew to low Earth orbit is called:

:

- (a) Chandrayaan
- (b) Prithviyaan
- (c) Gaganyaan
- (d) Vayuyaan

Itemcode : **CM1058**

Q28 Name the present Chairperson of the RajyaSabha of the Parliament of India

:

- (a) Sumitra Mahajan
- (b) Venkaiah Naidu
- (c) Meira Kumar
- (d) Mohamad Hanif Ansari

Itemcode : **CM1059**

Q29 The full form of NPCI is:

:

- (a) National Payments Corporation of India
- (b) National Pension Corporation of India
- (c) National Payments Council of India
- (d) National Pension Commission of India

Itemcode : **CM1060**

Q30 The Postal Highway Project, for which Government of India (GoI) is providing financial support, is located in which country?

:

- (a) Afghanistan
- (b) Myanmar
- (c) Nepal
- (d) Sri Lanka

Itemcode : **CM1001**

Q31 In the reaction

:



The conjugate acid-base pairs are

- (a) $\text{NH}_4^+/\text{NH}_3$ and $\text{H}_3\text{O}^+/\text{H}_2\text{O}$
- (b) $\text{NH}_4^+/\text{H}_3\text{O}^+$ and $\text{H}_2\text{O}/\text{NH}_3$
- (c) $\text{NH}_4^+/\text{H}_2\text{O}$
- (d) $\text{NH}_4^+/\text{H}_3\text{O}^+$ and $\text{NH}_4^+/\text{H}_2\text{O}$

Itemcode : **CM1002**

Q32 Which of the following solution cannot act as a buffer?

:

- (a) $\text{Na H}_2\text{PO}_4$ + H_3PO_4
- (b) CH_3COOH + CH_3COONa
- (c) HCl + NH_4OH
- (d) $\text{B}(\text{OH})_3$ + Borax

Itemcode : **CM1003**

Q33 The reaction

:

$$3\text{ClO}^-(\text{aq}) \rightarrow \text{ClO}^-(\text{aq}) + 2\text{Cl}^-(\text{aq})$$
 is an example of

- (a) Oxidation reaction
- (b) Reduction Reaction
- (c) Disproportionation reaction
- (d) Decomposition reaction

Itemcode : **CM1004**

Q34 50 mL of 0.02M NaOH is added to 50 mL of 0.04 M HCL Solution, The Ph of the resulting solution will be

:

- (a) 1.7
- (b) 2
- (c) 7
- (d) 2.7

Itemcode : **CM1005**

Q35 The ratio of gm-mole of a component to the total number of gm-mole in a mixture or solution is known as

:

- (a) Normality
- (b) Molality
- (c) Molarity
- (d) Mole fraction

Itemcode : **CM1006**

Q36 When a pH probe is used during a titration

:

- (a) It is still important to stop the titration at the end point
- (b) A strong acid and strong base must be used
- (c) The equivalence point is determined from the shape of the curve
- (d) An indicator is still necessary

Itemcode : **CM1007**

Q37 When one mole of ice melts to liquid at 0°C

:

- (a) The entropy of the system decreases
- (b) The entropy of the system remains the same
- (c) The entropy of the system increases
- (d) The order of the system increases

Itemcode : **CM1008**

Q38 pH of water is

:

- (a) Pressure dependent
- (b) Pressure independent
- (c) Temperature dependent
- (d) Temperature independent

Itemcode : **CM1009**

Q39 Adsorption indicators are used in

:

- (a) Fajan's method
- (b) Mohrs method
- (c) Volhards's method
- (d) All of the above

Itemcode : **CM1010**

Q40 In which of the following acid/base titrations, can we NOT determine the equivalence point in an accurate manner.

:

- (a) Strong Acid/ Strong Base
- (b) Strong Acid/ Weak Base
- (c) Weak Acid/ Weak Base
- (d) Weak Acid/Strong Base

Itemcode : **CM1011**

Q41 A solid pharmaceutical dispersed in a carrier gas is an example of which one of the following :

- (a) a gel
- (b) a foam
- (c) an emulsion
- (d) an aerosol

Itemcode : **CM1012**

Q42 For determination of molar mass of colloids, polymers and protein which colligative property is used? :

- (a) Diffusion Pressure
- (b) Atmospheric Pressure
- (c) Osmotic Pressure
- (d) Turgor pressure

Itemcode : **CM1013**

Q43 The end point for an EDTA titration is usually found out by using which indicator. :

- (a) Metallochromic
- (b) Redox
- (c) Acid Base
- (d) All of the above

Itemcode : **CM1014**

Q44 The pH of a solution is increased from 3 to 6, Its H^+ ion concentration will be :

- (a) Reduced to Half
- (b) Doubled
- (c) Reduced by 1000 times
- (d) Increased by 1000 times

Itemcode : **CM1015**

Q45 An aqueous solution of 6.3g oxalic acid di hydrate is made upto 250mL . The volume of 0.1N NaOH required to completely neutralize 10mL of this solution is

- (a) 40mL
- (b) 20mL
- (c) 4mL
- (d) 10mL

Itemcode : **CM1016**

Q46 What is incorrect about buffer solution? :

- (a) It contains a weak Acid and its Conjugate base
- (b) It contains a weak Base and its Conjugate acid
- (c) It shows change in pH on adding small amount of acid or base
- (d) All of the above

Itemcode : **CM1017**

Q47 A buffer solution is prepared by mixing 10mL of 1.0 M acetic acid and 20mL of 0.5M sodium acetate and then diluted to 100mL with distilled water.

If the pK_a of CH_3COOH is 4.76, what is the pH of the buffer solution prepared?

- (a) 5.21
- (b) 4.76
- (c) 4.34
- (d) 5.12

Itemcode : **CM1018**

Q48 Error that occurs due to equally affected measurements is called :

- (a) Random error
- (b) Systematic error
- (c) Frequent error
- (d) Precision

Itemcode : **CM1019**

Q49 How many significant figures should be reported for the result of the following calculation? :

$$(3.110 \times 10^{-3}) \times (0.021 \times 10^2)$$

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

Itemcode : **CM1020**

Q50 Which of the following is not a route of administration?

:

- (a) Intra Venous (IV)
- (b) Oral
- (c) Topical
- (d) Dissolution

Itemcode : **CM1021**

Q51 A prodrug is

:

- (a) The prototype member of a class of drugs.
- (b) The oldest member of a class of drugs.
- (c) An inactive drug that is transformed in the body to an active metabolite
- (d) A drug that is stored in body tissues and is then gradually released in the circulation

Itemcode : **CM1022**

Q52 In atomic absorption spectroscopy, which of the following is the

: Generally used radiation source?

- (a) Tungsten lamp
- (b) Xenon mercury arc lamp
- (c) Hydrogen or deuterium discharge lamp
- (d) Hollow cathode lamp

Itemcode : **CM1023**

Q53 Capsules normally fall into two main categories which are they?

:

- (a) Hard gelatin capsules and soft gelatin capsules
- (b) Hard gelatin capsules and layered capsules
- (c) Soft gelatin capsules and compressed capsules
- (d) Compressed and layered capsules

Itemcode : **CM1024**

Q54 Which of the thermal procedures we learned so far is not destructive in nature?

:

- (a) TGA
- (b) DTA
- (c) DSC
- (d) None of the above

Itemcode : **CM1025**

Q55 Which of the following formulations would not be applicable to ocular administration?

:

- (a) Solution
- (b) Liniment
- (c) Suspension
- (d) Ointment

Itemcode : **CM1026**

Q56 What does differential scanning calorimetry measure?

:

- (a) Electrical conductivity
- (b) Thermal expansion
- (c) Specific heat
- (d) Impact energy

Itemcode : **CM1027**

Q57 Which of the following detection methods is not commonly used to detect isotopically labeled drug metabolites?

:

- (a) Infrared spectroscopy
- (b) Nuclear Magnetic Resonance Spectroscopy
- (c) Scintillation counting (detection of radioactivity)
- (d) Mass Spectrometry

Itemcode : **CM1028**

Q58 Intravenous, Intramuscular and sub cutaneous are all examples of which routes of administration?

:

- (a) Pulmonary administration
- (b) Parenteral administration
- (c) Otic administration
- (d) Ocular administration

Itemcode : **CM1029**

Q59 Which of the following statements best describes radio dilution analysis?

:

- (a) A method of determining the ratio of unlabeled compound to labeled compound in a sample
- (b) A method of determining how much the radioactivity of a sample has decreased with time
- (c) A method of determining the level of a biosynthetic intermediate within a microbial cell
- (d) A method of determining radiochemical purity

Itemcode : **CM1030**

Q60 A tablet to treat headache must first be dissolved in water before swallowing. Which of the following best describes this

: type of tablet?

- (a) Modified Release
- (b) Oral disintegrating
- (c) Effervescent
- (d) Buccal