



रेलवे भर्ती बोर्ड / RAILWAY RECRUITMENT BOARD
सी ई एन नं. - 04/2024 - CEN No. - 04/2024



Test Date	28/04/2025
Test Time	12:45 PM - 2:15 PM
Subject	PHARMACIST (ENTRY GRADE)

* Note
Correct Answer will carry 1 mark per Question.
Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.
2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : General Ability

Q.1 Harish and Vineet move towards town B starting from town A, at a speed of 35 km/h and 36 km/h respectively. If Vineet reaches town B 40 minutes earlier than Harish, what is the distance between towns A and B?

- Ans** ☒ 1. 840 km
☐ 2. 838 km
☐ 3. 841 km
☐ 4. 834 km

Q.2 Which of the following correctly lists the sections of the Western Coastal Plains in India?

- Ans** ☐ 1. Konkan Coast, Coromandal Coast and Vembanad Coast
☒ 2. Konkan Coast, Karnataka Coast and Malabar Coast
☐ 3. Karnataka Coast, Eastern Coast and Malabar Coast
☐ 4. Northern Circar Coast, Malabar Coast and Coromandel Coast

Q.3 A and B can together complete a piece of work in 25 days. They worked together for 20 days and then B left. After another 10 days, A completed the remaining work. In how many days can A complete the entire work alone?

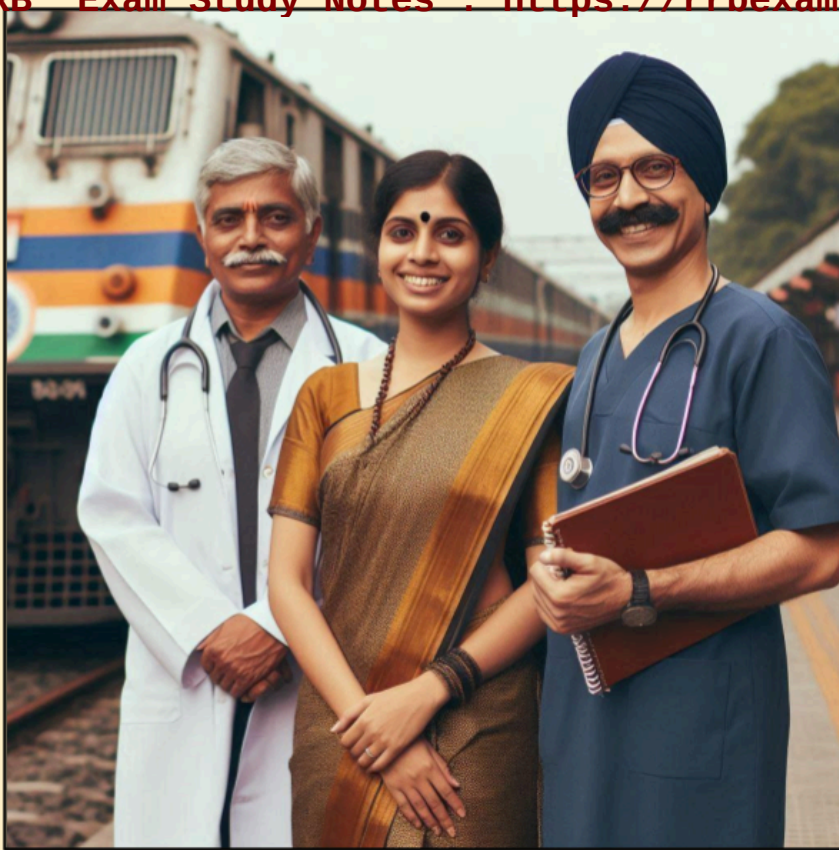
- Ans** ☐ 1. 60
☒ 2. 50
☐ 3. 40
☐ 4. 54

Q.4 The Dachigam Sanctuary, located in Jammu and Kashmir in India, is home to which of the following species?

- Ans** ☐ 1. Indian bison
☒ 2. Snow leopard
☐ 3. One-horned rhinoceros
☐ 4. Hippopotamus

Q.5 Who was sworn in as the Chief Minister of Maharashtra on 5 December 2024, following the state assembly elections?

- Ans** ☐ 1. Uddhav Thackeray
☒ 2. Devendra Fadnavis
☐ 3. Ajit Pawar
☐ 4. Eknath Shinde



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Q.6 The Indian government launched a new digital health initiative in 2025, to improve healthcare accessibility and interoperability of medical data. What is the name of this initiative?

- Ans**
- ☐ 1. National Health Stack Expansion
 - ☐ 2. Bharat AI Health Grid
 - ☐ 3. Digital India Healthcare 2025
 - ☒ 4. Ayushman Bharat Digital Mission 2.0

Q.7 The value of $\left(\frac{4}{7}\right) \times \left(\frac{21}{20}\right) + \left(\frac{6}{5} - 9\right)$ is

- Ans**
- ☐ 1. $-\frac{29}{3}$
 - ☒ 2. $-\frac{36}{5}$
 - ☐ 3. $-\frac{39}{8}$
 - ☐ 4. $-\frac{35}{9}$

Q.8 Which transformative reform was introduced in 2016, aiming to create 'one nation, one tax and one market' in India?

- Ans**
- ☐ 1. Nationalisation of state banks
 - ☒ 2. Implementation of the Goods and Services Tax
 - ☐ 3. Introduction of the Direct Tax Code
 - ☐ 4. Revision of the Customs Act for certain goods

Q.9 Bleaching powder is a white solid with a strong chlorine smell. It is commonly used in:

- Ans**
- ☐ 1. preserving food and softening water
 - ☐ 2. making fertilisers and plastics
 - ☒ 3. disinfecting water and bleaching fabrics
 - ☐ 4. manufacturing cement and glass

Q.10 Under Article 74 of the Indian Constitution, the Union Council of Ministers is mandated to aid and advise which authority?

- Ans**
- ☒ 1. The President of India
 - ☐ 2. The Lok Sabha Speaker
 - ☐ 3. The Prime Minister of India
 - ☐ 4. The Supreme Court of India

Q.11 Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster DOES NOT belong to that group?
(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

- Ans**
- ☐ 1. NPO
 - ☐ 2. JLK
 - ☐ 3. FHG
 - ☒ 4. RTU

Q.12 Which of the following sacrificed their lives for the protection of Khejri trees?

- Ans
- ☐ 1. Sunita Devi
 - ☐ 2. Savita Devi Bishnoi
 - ☐ 3. Sunita Willium
 - ☒ 4. Amrita Devi Bishnoi

Q.13 Who among the following social reformers worked to promote widow remarriage during the Indian National Movement?

- Ans
- ☐ 1. EV Ramaswamy Naicker
 - ☐ 2. Jyotirao Phule
 - ☐ 3. Swami Vivekananda
 - ☒ 4. Ishwarchandra Vidyasagar

Q.14 A vendor sold 20 chocolates for a rupee, thereby gaining 35%. How many did he buy for a rupee?

- Ans
- ☐ 1. 33
 - ☐ 2. 31
 - ☐ 3. 29
 - ☒ 4. 27

Q.15 Based on the English alphabetical order, three of the following four letter cluster pairs are alike in a certain way and thus form a group. Which is the one that DOES NOT belong to that group?
(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

- Ans
- ☐ 1. CO – HJ
 - ☐ 2. EA – JV
 - ☐ 3. ZS – EN
 - ☒ 4. MQ – RK

Q.16 The angle of deviation for a ray of light after passing through a prism is ____.

- Ans
- ☐ 1. the angle between the incident ray and one of the sides of the prism
 - ☐ 2. indeterminate
 - ☐ 3. the angle of the prism
 - ☒ 4. the angle between the emergent ray and incident ray

Q.17 18 is related to 107 following a certain logic. Following the same logic, 21 is related to 125. To which of the given options is 14 related, following the same logic?

(Note: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g., 13 – Operations on 13 such as adding/subtracting/multiplying to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

- Ans
- ☐ 1. 95
 - ☐ 2. 87
 - ☐ 3. 91
 - ☒ 4. 83

Q.18 Which of the following statements about sensitivity in plants is INCORRECT?

- Ans
- ☐ 1. Plants exhibit phototropism by growing towards the light source.
 - ☐ 2. Thigmotropism is the response of plants to touch or physical contact.
 - ☐ 3. Chemotropism is the growth response of plants to chemical stimuli in their environment.
 - ☒ 4. Plants have specialized Nervous tissues for conducting information.

Q.19 Identify the element whose given valency does not match its typical valency.

Element	Atomic number	Given valency
Be	4	2
Ne	10	0
Al	13	3
F	9	7

- Ans
- ☒ 1. Ne
 - ☒ 2. Be
 - ☒ 3. F
 - ☒ 4. Al

Q.20 Who among the following was posthumously awarded the Padma Vibhushan in January 2025 for his or her contributions to literature and education?

- Ans
- ☒ 1. Osamu Suzuki
 - ☒ 2. Kumudini Lakhia
 - ☒ 3. Sharda Sinha
 - ☒ 4. MT Vasudevan Nair

Q.21 Which of the following is correct regarding complex permanent tissue of plants?

- Ans
- ☒ 1. Phloem is responsible for transporting water
 - ☒ 2. These tissues are essential for the plant's transport system
 - ☒ 3. These tissues are plant tissues that consist of one type of cell
 - ☒ 4. Xylem is responsible for transporting organic nutrients

Q.22 Which one of the following monuments, constructed during the Mughal rule, is situated on the bank of river Yamuna?

- Ans
- ☒ 1. Akbar's Tomb
 - ☒ 2. Panch Mahal
 - ☒ 3. Taj Mahal
 - ☒ 4. Jama Masjid

Q.23 Which of the following sexual maturation changes occur in females?

- Ans
- ☒ 1. Narrowing of hips
 - ☒ 2. The breasts begin to grow
 - ☒ 3. Skin decreased oil production
 - ☒ 4. Stop of the menstrual cycle

Q.24 Six boxes A, B, C, D, E and F are kept one over the other but not necessarily in the same order. B is kept second from the bottom. Only one box is kept between B and F. Only three boxes are kept between C and D. D is kept immediately below B. Only two boxes are kept between A and E. A is kept immediately above C. Which box is third from the bottom?

- Ans
- ☒ 1. C
 - ☒ 2. A
 - ☒ 3. F
 - ☒ 4. E

Q.25 What is the work done in moving a charge of 10 C between two points with a potential difference of 14 V?

- Ans
- ☒ 1. 140 J
 - ☒ 2. 1.4 J
 - ☒ 3. 14 J
 - ☒ 4. 10 J

Q.26 Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:
All piles are quantities.
All stores are quantities.

Conclusions:
(I): Some piles are stores.
(II): Some quantities are stores.

- Ans**
- ☒ 1. Only conclusion (I) follows
 - ☒ 2. Both conclusions (I) and (II) follow
 - ☒ 3. Only conclusion (II) follows
 - ☒ 4. Neither conclusion (I) nor (II) follows

Q.27 Which of the following options is true about carbon compound combustion?

- Ans**
- ☒ 1. Burns without oxygen
 - ☒ 2. Never produces water
 - ☒ 3. Always forms carbon monoxide
 - ☒ 4. Needs more oxygen for complete combustion

Q.28 Find the circumference (in m) of the largest circle that can be inscribed in a rectangle whose dimensions are given as 49 m and 94 m.

take $\pi = \frac{22}{7}$

- Ans**
- ☒ 1. 154
 - ☒ 2. 163
 - ☒ 3. 159
 - ☒ 4. 149

Q.29 For image formation by a concave mirror, which of the following statements is true?

- Ans**
- ☒ 1. At the centre of curvature, the size of the image is the same as the size of the object.
 - ☒ 2. The nature of the image is real and erect when the object is at the centre of curvature.
 - ☒ 3. The size of the image is enlarged when the object is placed at infinity.
 - ☒ 4. An object placed at the focus forms a highly diminished image.

Q.30 Which constitutional amendment to the Indian Constitution introduced a Legislative Assembly for the Union Territory of Delhi?

- Ans**
- ☒ 1. 42nd Amendment
 - ☒ 2. 61st Amendment
 - ☒ 3. 69th Amendment
 - ☒ 4. 74th Amendment

Section : Professional Ability

Q.1 Interferon-α produced via rDNA technology is primarily used to treat:

- Ans**
- ☒ 1. Hypertension
 - ☒ 2. Chronic hepatitis C
 - ☒ 3. Diabetes mellitus
 - ☒ 4. Asthma

Q.2	Coronoray angioplasty is treatment done in the case of:
Ans	☒ 1. Angina Pectoris ☐ 2. Arrythmia ☐ 3. Myocardial infarction ☐ 4. Edema
Q.3	Which of the following is based on highly specific biological interactions between two molecules?
Ans	☐ 1. Gas chromatography ☐ 2. Gel electrophoresis ☒ 3. Affinity chromatography ☐ 4. HPLC
Q.4	Non-competitive antagonism differs from competitive antagonism by:
Ans	☐ 1. Reversible receptor binding ☐ 2. Dose-dependent reversal ☒ 3. Reduced maximal response even at high agonist doses ☐ 4. Acting on the same receptor site
Q.5	In determining the absolute bioavailability, systemic availability of a drug administered orally is determined by comparing it with:
Ans	☒ 1. intravenous administration ☐ 2. rectal administration ☐ 3. sublingual administration ☐ 4. intramuscular administration
Q.6	Which disorder is characterised by autoimmune demyelination of CNS neurons?
Ans	☒ 1. Multiple sclerosis ☐ 2. Meningitis ☐ 3. Epilepsy ☐ 4. Huntington's disease
Q.7	Cartilaginous framework of external nose is made up of:
Ans	☐ 1. Conchae bone ☐ 2. Cricoid cartilage ☒ 3. Hyaline cartilage ☐ 4. Superior nasal concha
Q.8	Flocculation in colloidal suspensions refers to:
Ans	☐ 1. Uniform particle distribution ☒ 2. Reversible aggregation of particles ☐ 3. Complete dissolution of particles ☐ 4. Irreversible particle coalescence
Q.9	Sympathetic stimulation of the bladder causes:
Ans	☐ 1. External sphincter relaxation ☐ 2. Increased urine production ☒ 3. Detrusor relaxation and internal sphincter contraction ☐ 4. Detrusor contraction and internal sphincter relaxation

Q.10 How is bioequivalence statistically evaluated?

- Ans**
- ☐ 1. Kaplan-Meier analysis
 - ☐ 2. Chi-square test
 - ☒ 3. Analysis of variance (ANOVA)
 - ☐ 4. Pearson correlation

Q.11 Which of the following best describes a free radical?

- Ans**
- ☒ 1. An unstable molecule with unpaired electrons.
 - ☐ 2. A molecule that only exists in vitamins.
 - ☐ 3. A stable molecule with paired electrons.
 - ☐ 4. A compound that always benefits the body.

Q.12 Which agency oversees pharmacovigilance in India?

- Ans**
- ☐ 1. European Medicines Agency (EMA)
 - ☐ 2. World Health Organization (WHO)
 - ☒ 3. Central Drugs Standard Control Organisation (CDSCO)
 - ☐ 4. Food and Drug Administration (FDA)

Q.13 According to quality guidelines, Q2 signifies:

- Ans**
- ☒ 1. analytical validation
 - ☐ 2. good manufacturing practice
 - ☐ 3. stability
 - ☐ 4. pharmaceutical quality system

Q.14 'Orange peel effect' can be mitigated by:

- Ans**
- ☐ 1. Slowing down the coating pan speed
 - ☐ 2. Decreasing spray distance
 - ☐ 3. Adding more talc to the coating formula
 - ☒ 4. Using a finer spray nozzle

Q.15 A combination of Aspirin and Paracetamol is said to have:

- Ans**
- ☐ 1. Functional antagonism
 - ☒ 2. Additive drug combinations
 - ☐ 3. Antagonist effect
 - ☐ 4. Supraadditive drug combinations

Q.16 What type of reaction occurs when alkanes react with oxygen?

- Ans**
- ☐ 1. Elimination
 - ☐ 2. Substitution
 - ☐ 3. Addition
 - ☒ 4. Combustion

Q.17 Good manufacturing practice is a part of:

- Ans**
- ☐ 1. safety guidelines
 - ☐ 2. efficacy guidelines
 - ☒ 3. quality management systems
 - ☐ 4. multidisciplinary guidelines

Q.18	What is the optical device used to draw images from a microscope called?
Ans	✖ 1. Optical microscope ✖ 2. Stage micrometer ✔ 3. Camera lucida ✖ 4. Scanning electron microscope
Q.19	Which of the following is an example of fibrous joints?
Ans	✔ 1. Syndesmoses ✖ 2. Labrum ✖ 3. Symphysis ✖ 4. Synchrondrosis
Q.20	Serotonin syndrome is most likely caused by combining Selective Serotonin Reuptake Inhibitors with:
Ans	✖ 1. Non-steroidal anti-inflammatory drugs ✔ 2. Monoamine oxidase inhibitors ✖ 3. Beta-blockers ✖ 4. Diuretics
Q.21	Child proof packing must meet the performance specifications outlined in:
Ans	✖ 1. GMP ✖ 2. Quality standards ✖ 3. Schedules ✔ 4. CFR
Q.22	Under the Pharmacy Act 1948, who constitutes the State Pharmacy Council?
Ans	✖ 1. Members appointed by the Central Council ✔ 2. Elected pharmacists and government nominees ✖ 3. Only government officials ✖ 4. Representatives from medical colleges
Q.23	The purpose of carrying out distillation under reduced pressure is to:
Ans	✖ 1. enhance the boiling point of mixtures ✔ 2. avoid thermal degradation of molecules ✖ 3. enhance the efficacy of the distillation process ✖ 4. separate of azeotropes and liquids of similar volatility
Q.24	Ethylene oxide gas sterilisation requires:
Ans	✖ 1. Direct sunlight exposure ✔ 2. High humidity and sealed chambers ✖ 3. Immediate use post-sterilisation ✖ 4. No aeration period
Q.25	What quantitative tool evaluates the success of a new drug launch?
Ans	✖ 1. Focus group feedback ✖ 2. Brand association studies ✔ 3. Sales growth percentage ✖ 4. Customer testimonials

Q.26 Validation of chemical sterilisation cycles includes measuring:

- Ans**
- ☒ 1. contact time and concentration
 - ☐ 2. temperature only
 - ☐ 3. colour change indicators
 - ☐ 4. pH of the solution

Q.27 Anticholinesterase are is commonly used as:

- Ans**
- ☐ 1. Industrial pesticide
 - ☐ 2. Agricultural fertilizer
 - ☐ 3. Fungicide
 - ☒ 4. Agricultural and household insecticide

Q.28 Child proof packing is regulated through the:

- Ans**
- ☒ 1. Poison Prevention Packaging Act
 - ☐ 2. Poison Prevention Packaging Guideline
 - ☐ 3. Pharmacy Council of India
 - ☐ 4. Poison Prevention Rule

Q.29 Which of the following is a Carbonic Anhydrase Inhibitors?

- Ans**
- ☐ 1. Torsemide
 - ☒ 2. Acetazolamide
 - ☐ 3. Telmisartan
 - ☐ 4. Furosemide

Q.30 Which of the following is incorrect statement in relation to adverse drug reaction?

- Ans**
- ☐ 1. Type A reactions are also termed as predictable reaction
 - ☒ 2. Type B is a known and dose related reaction
 - ☐ 3. Type B reactions occurs due to pharmacologically known reaction of drug.
 - ☐ 4. Type A reaction is patient dependent reaction

Q.31 The most common type of kidney stone is composed of:

- Ans**
- ☒ 1. Calcium oxalate
 - ☐ 2. Cystine
 - ☐ 3. Struvite
 - ☐ 4. Uric acid

Q.32 What does GACP stand for in the context of pharmaceutical and herbal product development?

- Ans**
- ☐ 1. Good Analytical and Clinical Practices
 - ☐ 2. General Agricultural and Cultivation Policy
 - ☒ 3. Good Agricultural and Collection Practice
 - ☐ 4. Global Association for Clinical Pharmacy

Q.33 Feedback inhibition is also termed as:

- Ans**
- ☐ 1. compartmentation
 - ☐ 2. latent enzyme activation
 - ☒ 3. end product inhibition
 - ☐ 4. initial product inhibition

Q.34 The volume capacity of a size 1 hard capsule is approximately:

- Ans**
- ☐ 1. 1.0 mL
 - ☒ 2. 0.5 mL
 - ☐ 3. 0.7 mL
 - ☐ 4. 1.5 mL

Q.35 A single antibody molecule comprises of _____ polypeptide chains.

- Ans**
- ☐ 1. two
 - ☐ 2. six
 - ☐ 3. three
 - ☒ 4. four

Q.36 Which branch of pharmacology studies "what the drug does to the body"?

- Ans**
- ☐ 1. Pharmacotherapeutics
 - ☐ 2. Pharmacokinetics
 - ☐ 3. Pharmacovigilance
 - ☒ 4. Pharmacodynamics

Q.37 Which of the following components in functional foods helps improve digestive health?

- Ans**
- ☐ 1. Artificial sweeteners
 - ☐ 2. Preservatives
 - ☐ 3. Antioxidants
 - ☒ 4. Probiotics

Q.38 Which material is preferred for parenteral drug packaging due to chemical inertness?

- Ans**
- ☐ 1. Polyvinyl chloride
 - ☒ 2. Borosilicate glass
 - ☐ 3. Polyethylene
 - ☐ 4. Aluminium foil

Q.39 Which of the following governing bodies is constituted every five years by the Central Government?

- Ans**
- ☐ 1. State tribunals
 - ☒ 2. Pharmacy council of India
 - ☐ 3. State pharmacy council
 - ☐ 4. Drug inspector

Q.40 The final electron acceptor in the electron transport chain is :

- Ans**
- ☒ 1. Oxygen
 - ☐ 2. ATP synthase
 - ☐ 3. Coenzyme Q
 - ☐ 4. Cytochrome c

Q.41 Which of the following is an example of absorption interaction?

- Ans**
- ☐ 1. Folic acid - Phenytoin
 - ☐ 2. Corticosteroids - Barbiturates
 - ☐ 3. PAS - Probenecid
 - ☒ 4. Tetracycline - Milk

Q.42 The study of the poisonous effect of drugs is known as:

- Ans**
- ☐ 1. Clinical pharmacology
 - ☒ 2. Toxicology
 - ☐ 3. Pharmacotherapeutics
 - ☐ 4. Pharmacy

Q.43 What is the main purpose of consuming functional foods?

- Ans**
- ☐ 1. To gain weight quickly
 - ☐ 2. To replace regular medicines
 - ☐ 3. To enhance flavour in meals
 - ☒ 4. To support specific body functions and prevent diseases

Q.44 Characteristics of consumer behaviour is a process where consumer decides whether:

- Ans**
- ☐ 1. what to sell
 - ☐ 2. what to endorse
 - ☐ 3. what to advertise
 - ☒ 4. what to buy

Q.45 Meiosis results in _____ number of cells are formed.

- Ans**
- ☒ 1. 4
 - ☐ 2. 32
 - ☐ 3. 2
 - ☐ 4. 16

Q.46 Global acceptance of herbal drug standards is facilitated by :

- Ans**
- ☐ 1. Traditional medicine registries
 - ☒ 2. ICH harmonization efforts
 - ☐ 3. Mutual recognition agreements
 - ☐ 4. National pharmacopoeias

Q.47 Acid-base catalysis involves:

- Ans**
- ☐ 1. Formation of a covalent bond with the substrate
 - ☒ 2. Donation/acceptance of protons by the catalyst
 - ☐ 3. Transfer of electrons between reactants
 - ☐ 4. Use of metal ions as catalysts

Q.48 Cell death which is caused by tissue injury is known as:

- Ans**
- ☐ 1. Pinocytosis
 - ☐ 2. Apoptosis
 - ☐ 3. Phagocytosis
 - ☒ 4. Necrosis

Q.49 Glassware and metal ware can be sterilised through:

- Ans**
- ☐ 1. disinfection
 - ☐ 2. gaseous sterilisation
 - ☒ 3. dry heat sterilisation
 - ☐ 4. chemical sterilisation

Q.50	Which of the following is an anti-hyperlipidemic drug?
Ans	☐ 1. Tirofiban ☒ 2. Lovastatin ☐ 3. Rivaroxaban ☐ 4. Ticagrelor
Q.51	ASUDTAB stands for:
Ans	☐ 1. Ayurvedic, Siddha and Unani Drugs Advisory Board ☐ 2. Ayurvedic, Siddha and Unani Drugs Technical Adjuvant Board ☒ 3. Ayurvedic, Siddha and Unani Drugs Technical Advisory Board ☐ 4. Ayurvedic, Siddha and Unani Drugs Technical Advisory Committee
Q.52	In an exothermic reaction, enthalpy is:
Ans	☒ 1. only negative ☐ 2. both negative and positive ☐ 3. only positive ☐ 4. zero
Q.53	What is the full form of MFR?
Ans	☐ 1. Master Formula Register ☐ 2. Manufacturing Formula Record ☐ 3. Main Formula Register ☒ 4. Master Formula Record
Q.54	Which of the following is/are used to make a homogeneously dispersed aerosol preparation?
Ans	☒ 1. Surfactants ☐ 2. Detergents ☐ 3. Binder ☐ 4. Glidant
Q.55	How does the inspiratory flow rate affect drug deposition in dry powder inhalers?
Ans	☒ 1. Higher flow rates enhance deep lung deposition ☐ 2. Flow rate has no impact ☐ 3. Lower flow rates improve lung deposition ☐ 4. Higher flow rates decrease fine particle fraction
Q.56	Cidofovir is primarily used to treat:
Ans	☐ 1. Influenza A ☐ 2. Herpes simplex virus infections ☐ 3. Hepatitis C ☒ 4. Cytomegalovirus (CMV) retinitis
Q.57	Quaternary ammonium compounds (QACs) are:
Ans	☐ 1. Biguanides ☐ 2. Anionic surfactants ☐ 3. Phenolic derivatives ☒ 4. Cationic surfactants

Q.58	Which of the following is a plasma volume expander?
Ans	☐ 1. Apixaban ☐ 2. Heparins ☐ 3. Vitamin K ☒ 4. Human Albumin
Q.59	Prazosin is a:
Ans	☐ 1. Non-selective α-blocker ☒ 2. α1-selective blocker ☐ 3. β1-selective blocker ☐ 4. β2 agonist
Q.60	Which structure prevents the backflow of stomach acid into the esophagus?
Ans	☐ 1. Sphincter of Oddi ☐ 2. Ileocecal valve ☒ 3. Lower esophageal sphincter ☐ 4. Pyloric sphincter
Q.61	What is the advantage of non per oral extravascular routes over other routes?
Ans	☐ 1. Faster degradation of drug ☐ 2. Enhanced first pass metabolism ☒ 3. Avoidance of first pass metabolism ☐ 4. Enhanced gastrointestinal motility
Q.62	Which channel strategy maximizes profitability for high-margin speciality drugs?
Ans	☐ 1. Third-party distributors ☒ 2. Direct-to-hospital sales ☐ 3. Discounted online platforms ☐ 4. Mass-market retail
Q.63	Glutaraldehyde is used as a/an:
Ans	☐ 1. fungicide ☐ 2. antibiotic ☒ 3. surface disinfectant ☐ 4. antiseptic
Q.64	Identify, which of the following is not a liquid dosage form?
Ans	☐ 1. Nasal drops ☐ 2. Ear drops ☒ 3. Tablet ☐ 4. Enemas
Q.65	Which indicator is ideal for titrating acetic acid (weak acid) with sodium hydroxide (strong base)?
Ans	☒ 1. Phenolphthalein ☐ 2. Methyl red ☐ 3. Litmus ☐ 4. Bromophenol blue

Q.66 Orally administered osmotic pump is an example of:

- Ans**
- ✓ 1. a controlled drug delivery system
 - ✗ 2. a prolonged release drug delivery system
 - ✗ 3. a delayed release drug delivery system
 - ✗ 4. an immediate release drug delivery system

Q.67 Phase 2 of equipment validation refers to:

- Ans**
- ✗ 1. pre-validation phase
 - ✓ 2. process validation phase
 - ✗ 3. design qualification
 - ✗ 4. validation maintenance phase

Q.68 Hydrogen peroxide vapour sterilisation differs from ethylene oxide in that it:

- Ans**
- ✓ 1. Leaves no toxic residues
 - ✗ 2. Is non-flammable
 - ✗ 3. Cannot sterilise implants
 - ✗ 4. Requires higher temperatures

Q.69 A person is eligible for pharmacy registration if she or he:

- Ans**
- ✗ 1. has been engaged in the compounding of drugs in a hospital or dispensary for not less than six months
 - ✗ 2. has been engaged in the compounding of drugs in a hospital or dispensary for not less than three months
 - ✓ 3. has a degree or diploma in pharmacy from an Indian University or a State Government
 - ✗ 4. has been engaged in the dispensing of drugs for not less than six months

Q.70 Which interaction reduces the efficacy of boric acid?

- Ans**
- ✗ 1. Storage at high temperatures
 - ✗ 2. Exposure to sunlight
 - ✓ 3. Mixing with alkaline solutions
 - ✗ 4. Combination with antibiotics