

1. The research that is especially carried out to test and validate the study hypotheses is termed
 - a. Fundamental research
 - b. Applied research
 - c. Conclusive research
 - d. Exploratory research
2. A screening test is used in the same way in two similar populations, but the proportion of false-positive results among those who test positive in population A is lower than that among those who test positive in population B. What is the likely explanation for this finding?
 - a. It is impossible to determine what caused the difference
 - b. The specificity of the test is lower in population A
 - c. The prevalence of disease is lower in population A
 - d. The prevalence of disease is higher in population A
3. In a small pilot study, 12 women with endometrial cancer (cancer of the uterus) and 12 women with no apparent disease were contacted and asked whether they had ever used estrogen. Each woman with cancer was matched by age, race, weight, and parity to a woman without disease. What kind of study design is this?
 - a. Prospective cohort study
 - b. Retrospective cohort study
 - c. Case-control study
 - d. Cross-sectional study
4. A researcher wants to investigate if tea consumption (assessed by a biomarker for tea metabolism) increases the risk of CHD. He uses a case-control study to answer this question. CHD is rare in younger people. Which two groups are best to enroll and compare for this purpose?
 - a. The group of CHD cases and a group of those who do not have CHD individually matched to the cases for tea metabolism biomarker
 - b. The group of CHD cases and a group of those who do not have CHD frequency matched to the cases for tea metabolism biomarker
 - c. The group of CHD cases and a group of those who do not develop CHD, matched for age
 - d. A random sample of those who drink tea and a random sample of those who do not drink tea, matched for age
5. The major purpose of random assignment in a clinical trial is to:
 - a. Help ensure that study subjects are representative of the general population
 - b. Facilitate double blinding (masking)
 - c. Ensure that the study groups have comparable baseline characteristics
 - d. Reduce selection bias in the allocation of treatment
6. The purpose of a double blind or double masked study is to:
 - a. Achieve comparability of treated and untreated subjects
 - b. Reduce the effects of sampling variation
 - c. Avoid observer and subject bias
 - d. Avoid observer bias and sampling variation
7. Which of the sets of activities best indicate the cyclic nature of action research strategy?
 - a. Reflect, Observe, Plan, Act
 - b. Observe, Act, Reflect, Plan
 - c. Act, Plan, Observe, Reflect
 - d. Plan, Act, Observe, reflect
8. A research intends to explore the result of possible factors for the organization of effective mid-day meal interventions. Which research method will be most appropriate for this study?
 - a. Descriptive survey method
 - b. Historical method
 - c. Ex-post facto method
 - d. Experimental method
9. What is the use of Factorial Analysis?
 - a. For setting the hypotheses
 - b. To understand the difference between two variables
 - c. To understand the relationship between two variables
 - d. To understand the difference between various variables
10. All the following are components of 'FINER' criteria for a research question EXCEPT
 - a. Feasible
 - b. Reliable
 - c. Novel
 - d. Ethical
11. Which of the following about PubMed is incorrect?
 - a. PubMed comprises more than 25 million citations for biomedical literature.
 - b. Citations may include links to full-text article from PubMed Central.
 - c. PubMed is developed and maintained by the National Centre for Biotechnology Information (NCBI), at the U.S. National Library of Medicine (NLM).
 - d. PubMed is a paid service provider for searching of literature.
12. The following study design provides group exposure and group response/outcome without knowing the individual exposure and response for a specific health problem.
 - a. Ecological study
 - b. Cross-sectional survey
 - c. Case report
 - d. Case series
13. The ability of a tool to correctly measure what it is supposed to measure is called as
 - a. Precision
 - b. Validity
 - c. Reliability
 - d. Consistency
14. Which of the following statement is true regarding Participant Observation
 - a. Observer becomes a part of the event/group
 - b. Systematic collection of data is easy
 - c. Analytic methods for observation are well described
 - d. Data is brief as compared to in-depth interviews
15. The list of all individuals in the study population from whom study participants in a research are to be selected is known as
 - a. Sampling frame
 - b. Study population
 - c. Sampling unit
 - d. Study sample
16. A researcher wants to estimate the prevalence of surgical site infection following cesarean section at a tertiary care hospital. What would be the minimum number of the sample size to estimate the magnitude of surgical site infection following cesarean section if it is estimated that the proportion of surgical site infection will be 10% in the hospital considering 5% absolute precision and 95% confidence level ($Z_{\alpha/2} = 1.96$)
 - a. 100
 - b. 138
 - c. 148
 - d. 158

17. Glasgow coma Scale (GCS) is a scoring system to understand the consciousness level of a person. The score varies between 3 and 15. A researcher has included a question in research tool- "What is the GCS score during admission?" This question is an example of-
- Open question
 - Closed question with dichotomous option
 - Closed question with multiple option
 - Closed question with quantitative answers
18. In an observational study on menstrual hygiene among school going girls aged 14 to 16 years, informed assent will be required to be taken from the adolescent girls. In addition, informed consent will be required from:
- Parent of adolescent girls
 - Institutional Head
 - both
 - None of the above
19. Immediately after identification of research topic and statement of objectives, it may be preferable to
- Write protocol
 - Outline one-page concept paper
 - Prepare dummy tables as per the analysis plan
 - Seek review by an institutional ethics committee
20. A study participant can be forced by the investigator to continue in a trial against his will. This is in conflict with which of the following ethical principles?
- Autonomy
 - Justice
 - Beneficence
 - None of the above
21. All of the following veins drain into coronary sinus except:
- Anterior cardiac V.
 - Small cardiac V.
 - Great cardiac V.
 - Middle cardiac V.
22. A 53-year-old woman is found, by arteriography, to have 50% narrowing of her left renal artery. What is the expected change in blood flow through the stenotic artery?
- Decrease to 1/2
 - Decrease to 1/4
 - Decrease to 1/8
 - Decrease to 1/16
23. A patient with a duodenal ulcer is treated successfully with the drug cimetidine. The basis for cimetidine's inhibition of gastric H⁺ secretion is that it
- Blocks muscarinic receptors on parietal cells
 - Blocks H₂ receptors on parietal cells
 - Increases intracellular cyclic adenosine monophosphate (cAMP) levels
 - Blocks H⁺K⁺-adenosine triphosphatase (ATPase)
24. What is the correct sequence of donning of PPEs?
- Gloves → Gown → Mask → Goggles
 - Gown → Mask → Goggles → Gloves
 - Goggles → Gloves → Mask → Gown
 - Mask → Gown → Goggles → Gloves
25. All are precipitation reactions except
- VDRL test
 - Kahn test
 - Widal test
 - Ascoli's test
26. All are true for Gradenigo's syndrome except:
- facial palsy
 - retro orbital pain
 - superior oblique palsy
 - infection of petrous apex
27. Name the enzyme responsible for removing supercoiling while replication
- Helicase
 - Topoisomerase
 - Primase
 - DNA Polymerase
28. Warfarin is an anti-coagulant medication which is known for its enzyme inducing and high plasma protein binding properties. It also noted that Warfarin has a low volume of distribution indicating that:
- The drug has longer Half Life
 - The drug has low bioavailability
 - The drug has low efficacy
 - The drug is not extensively distributed to tissues
29. During research about a drug's actions, especially in randomised control trials, the control group might be given a placebo or another drug for comparison. Which of the following statement(s) is/ are true about Placebo?
- It has pharmacodynamic activity
 - It is the active moiety of the table
 - It produces same effect in all patients
 - It is the inert substance
30. Most common extra- cranial complication of ASOM is:
- Facial nerve paralysis
 - Lateral sinus thrombosis
 - Sub periosteal abscess
 - Brain abscess
31. Most common retroperitoneal tumour is
- Rhabdomyosarcoma
 - neurofibroma
 - Liposarcoma
 - synovial sarcoma
32. In carcinoma base of tongue pain is referred to the ear through:
- hypoglossal nerve
 - vagus nerve
 - glossopharyngeal nerve
 - lingual nerve
33. A ten year old girl presented with pain between the eyes, frontal headache, discharge from the nose, post nasal drip and high fever; what is the provisional diagnosis?
- Acute frontal sinusitis.
 - Acute ethmoidal sinusitis.
 - Acute sphenoidal sinusitis.
 - Sphenoidal tumor.
34. 20-year-old female with easy fatiguability and pallor. Hands have hyperpigmented knuckles and white nails. What is your diagnosis
- Aplastic anaemia
 - IDA
 - B12 Deficiency
 - Hypoalbuminemia
35. A healthy 5 years male child presented to the ENT department with right sided nasal obstruction, foul-smelling and blood-stained discharge. The most likely diagnosis is:
- Simple nasal polyp
 - Antrochoanal polyp
 - Foreign body
 - Angiofibroma
36. A patient with weight gain and lassitude. Investigations shows increased TSH and low T₄. What may be the possibility
- Graves disease
 - Hashimoto's
 - Pituitary adenoma
 - Hypoparathyroidism
37. Which condition does not typically result in high frequency hearing loss?
- NIHL
 - Presbycusis
 - Meniere's disease
 - Acoustic neuroma

38. If ST-elevation was noted in leads II, III and aVF, what would it suggest?
- An inferior MI
 - A posterior MI
 - An anterior MI
 - A septal MI
39. A 70 year old man underwent radical prostatectomy, his surgery was uneventful except he required 2 units of PRBC during surgery. He is recovering without any adverse events. On 10th day after surgery, he tries to get out of the bed and use the washroom on his own. After returning from washroom the patient complains of severe chest pain, breathlessness, palpitations. Which is the most likely cause of such manifestations
- Thromboembolism
 - TRALI
 - Cardiogenic pulmonary edema due to blood transfusion
 - Post transfusion sepsis
40. Which of the following is not causes of neurogenic diabetes insipidus?
- Trauma
 - Meningitis
 - Mutation in vasopressin receptor gene
 - Sheehan syndrome
41. Otitic barotrauma results due to:
- Ascent in air
 - Descent in air
 - Linear acceleration
 - Sudden acceleration
42. Which of the following is least common causes of postpartum haemorrhage?
- Uterine atony
 - Vaginal lacerations
 - Retained placenta
 - coagulopathy
43. A 45 year old man presented to the emergency department with colicky abdominal pain, vomiting, and a painful groin lump. On examination he had a pulse of 110 beats/min and temperature of 37.8°C. There was marked abdominal distension, high pitched bowel sounds, and an erythematous, tender mass in the left groin above and medial to the pubic tubercle . A plain abdominal radiograph and other investigations shown it to be a case of small bowel obstruction secondary to an irreducible inguinal hernia. What is the next step in management?
- Apply local pressure to the swelling to reduce it
 - Discharge with analgesia
 - Elective surgery
 - Nil by mouth, nasogastric tube, and intravenous drip
44. At what stage of gestation would you expect a nulliparous women to begin to feel fetal movements?
- 18-20 weeks
 - 10-12 weeks
 - 22-24 weeks
 - 14-16 weeks
45. Staining of lipid is best with
- frozen section
 - Liquid paraffin
 - formalin fixed
 - Ramnovsky stain
46. You are asked to review a 63-year-old female who was admitted with shortness of breath. On your arrival, the patient appears drowsy and is on 10L of oxygen via a mask. You perform an ABG, which reveals the following results:
- PaO₂: 7.0 kPa (11-13 kPa) || 52.5 mmHg (82.5 – 97.5 mmHg)
 - pH: 7.29 (7.35 – 7.45)
 - PaCO₂: 9.1 kPa (4.7 – 6.0 kPa) || 68.2 mmHg (35.2 – 45 mmHg)
 - HCO₃⁻: 26 (22 – 26 mEq/L)
 - Base excess: +1 (-2 to +2)
- What does the ABG show?
- Metabolic acidosis
 - Respiratory acidosis
 - Mixed acidbase disorder
 - Compensated metabolic alkalosis
47. Absence of parietal cells is seen in all except?
- Pernicious anaemia
 - Carcinoid syndrome
 - Zollinger Ellison syndrome
 - VitB12 deficiency
48. Cryoprecipitate is not used in treatment of which of the following disease?
- Afibrinogenemia
 - Factor XIII deficiency
 - VWD
 - Aquired hemophilia
49. All are precancerous for colon cancer except
- Crohn's disease
 - Bile acids
 - Fats
 - Carotene
50. Warts can be treated by all except
- Laser
 - Cryotherapy
 - Electrocautery
 - Intralesional steroids
- *****

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