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M/P ENT - 21 Total No. of Pages : 12

Seat No.

M.Phil./Ph.D. Entrance Examination, May - 2019 PHARMACY

Day and Date : Tuesday, 21 - 05 - 2019 Time : 10.00 a.m. to 12.00 noon

Instructions : 1) All questions are compulsory.

- 2) Each question carries 2 marks.
 - **3)** Answers should be marked in the given OMR answer sheet by darkening the appropriate option.
 - 4) Use black ball point pen only for marking the circle. Do not make any stray mark on the OMR Answer Sheet.
 - 5) Follow the instructions given on OMR Sheet.
 - 6) Rough work shall be done on the sheet provided at the end of question paper.
 - 7) Only non programmable calculators are allowed.
- 1) Research related to abstract ideas or concepts is
 - A) Empirical research B) Conceptual research
 - C) Quantitative research D) Qualitative research
- 2) Parametric test, unlike the non-parametric tests, make certain assumptions about
 - A) The population size B) The underlying distribution
 - C) The sample size D) None of the above
- 3) What is an effect size?
 - A) the magnitude of the relationship between variables
 - B) The likelihood of type 1 and type 2 errors
 - C) the number of expected cases
 - D) the variance explained by the measures

Total Marks : 100

- 4) You obtained a significant test statistic when comparing three treatments in a one-way ANOVA. In words, how would you interpret the alternative hypothesis HA?
 - A) All three treatments have different effects on the mean response.
 - B) Exactly two of the three treatments have the same effect on the mean response.
 - C) At least two treatments are different from each other in terms of their effect on the mean response.
 - D) All of the above
- 5) In Testing the statistical hypothesis, which of the following statement is false
 - A) The critical region is the values of the test statistic for which we reject null hypothesis.
 - B) The level of significance is the probability of type I error
 - C) The p-value measures the probability that the null hypothesis is true
 - D) None of the above

6) A tentative proposition subject to test is

- A) Variable B) Hypothesis
- C) Data D) Concept

7) which deals with the techniques by which the procedures specified in the sampling, statistical and observational designs can be carried out.

- A) Statistical design B) Observational design
- C) Operational design D) Sampling design

- In a survey the number questions is 8) Unlimited Limited A) B) Both limited and unlimited D) None of the above C) Conclusions from qualitative research are 9) Less certain than from quantitative research A) Of little practical use B) Of descriptive value only C) Seldom defensible D) 10) A Research Report is a formal statement of . **Research Process Research Problem** A) B) Data collection D) Data Editing C) 11) Bibliography means Quotations A) Foot Note B) Biography C) List of Books referred D) 12) Failure to acknowledge the borrowed material is called (Take and use of others
 - A) AcknowledgementB) Foot noteC) IndexD) Plagiarism

as one's own).

- 13) Facts, figures and other relevant materials serving as bases for a study is called.
 - A) SampleB) MethodC) DataD) Theory
- 14) Sending Questionnaire to a respondent with a request to complete and return by post is called
 - A) Mail Survey B) Interview
 - C) Observation D) Panel
- 15) Sampling which provides for a known non zero chance of selection is
 - A) Probability sampling B) Non probability sampling
 - C) Multiple Choices D) Analysis
- 16) Method in which researcher uses more than one quantitative data collection technique
 - A) Multi method qualitative design
 - B) Mono method quantitative design
 - C) Multi method quantitative design
 - D) Mono method qualitative design
- 17) A literature review is based on the assumption that:
 - A) Copy from the work of others
 - B) Knowledge accumulates and learns from the work of others
 - C) knowledge disaccumulates
 - D) None of the above option

- 18) A systematic, controlled, empirical and critical investigation of natural phenomena guided by theory and hypothesis is called _____.
 - A) Applied Research
 - B) Basic Research
 - C) Scientific Research
 - D) None of the above
- 19) The first step in the research process is the:
 - A) Development of the research plan
 - B) Survey of stakeholders to determine if problems exist
 - C) Collection of the available sources for needed information
 - D) Definition of the problem and research objectives
- 20) The starting point for a literature search is:
 - A) Tertiary data B) Primary data
 - C) Secondary data D) Some other data
- 21) Research is
 - A) Searching again and again
 - B) Finding solution to any problem
 - C) Working in a scientific way to search for truth of any problem
 - D) None of the above

- 22) Type of sampling in which each element of population has equally likely chance of occurrence in a random sample is classified as
 - A) Regular and irregular sampling B) Error free sampling
 - C) Inertia sampling D) Simple random sampling
- 23) In testing a Hypothesis the common error is
 - A) Type I B) Type I and II
 - C) Type II D) None of these
- 24) The final research report is NOT:
 - A) A research proposal
 - B) A basis for decision making
 - C) Tangible evidence of a research project
 - D) Future secondary data
- 25) Which proposal section is intended to describe the purpose with a full statement of the research question?
 - A) Literature review B) Introduction
 - C) Proposed Method D) References
- 26) How much minutes is a disintegration time for sublingual tablets?
 - A) 2 B) 15
 - C) 30 D) 60

- 27) Pharmacy Practice Regulation 2015 (Government of India) has made a following provision for registered pharmacist.
 - A) Prescribe the medicines in absence of doctors
 - B) Charge his professional consultation fees
 - C) Sale all generic medicines without prescription to needy patients
 - D) Start pathology laboratory in pharmacy
- 28) If chloroquine is having 1500 liters of apparent volume of distribution, then which of the following interpretation is true
 - A) High degree of protein binding
 - B) Extensive distribution in total body water
 - C) Extensive distribution in the body fat
 - D) Deposition in the brain
- 29) Which of the following category of drug can be formulated in to sustained release dosage form?
 - A) Having absorption as rate limiting step
 - B) Actively absorbed from GIT
 - C) Having biological half life 2-6 hrs
 - D) Having dissolution as rate limiting step
- 30) Which of the following grade of Eudragit is preferred in formulation of enteric coated formulations?
 - A) Eudragit S B) Eudragit L
 - C) Eudragit RS D) Eudragit RL

- 31) The process of purification and recovery of a product in biotechnology is known as
 - A) Upstream processing B) Downstream processing
 - C) Incubation D) Formulation
- 32) Which of the following machine is useful in the filling of powdered dry solids in soft gelatin shell?
 - A) ZANSI B) ACOGEL
 - C) ROTOFILL D) ROTOSORT
- 33) Dilatent materials follow which type of behavior?
 - A) Shear thinning B) Shear thickening
 - C) Thixotropic D) Rheopexic
- 34) A 43-year-old man has abnormal liver function tests noted at a routine work related medical checkup. He has a history of angina. Which of the following drug is most likely to be responsible?
 - A) AtorvastatinB) AmlodipineC) AspirinD) Atenolol
- 35) Which of the following cytochrome P450 isoenzymes is involved in the metabolism of largest number of drugs in human beings and has been implicated in some dangerous drug interactions?
 - A) CYP 3A4 B) CYP 2C9
 - C) CYP 2EI D) CYP 1A2

- A) Promethazine B) Terfenadine
- C) Cyproheptadine D) Hydroxyzine

37) The following allergic drug reaction is caused by circulating antibodies

- A) Serum sickness B) Anaphylactic shock
- C) Systemic lupus erythematosus D) Angioedema

38) Given below are examples of naturally occurring alkaloids EXCEPT

- A) Atropine B) Ephedrine
- C) Homotropine D) Tubocurarine
- 39) *Rauwolfia serpentina* Benth., can be distinguished from other adulterants/ substitutes of Rauwolfia spp. by
 - A) Presence of starch grains
 - B) Presence of calcium oxalate crystals
 - C) Presence of trichomes
 - D) Presence of sclerides
- 40) Which of following reagent gives blue color with Ergot alkaloids that subsequently can be explored in their colorimetric estimation?
 - A) Potassium Bismuth Iodide B) Potassium Mercuric Iodide
 - C) P-Dimethylamino benzaldehyde D) P-Diethylamino benzaldehyde
- 41) Plant derived anti-malarial drug acts by liberating free radicals & thereby killing protozoa, Plasmodium falciparum. Identify that drug from following.
 - A) Artemisinin B) Quinine
 - C) Quinidine D) Chloroquine

- 42) Around which wave number strong absorption peak is observed in the IR spectrum of phenol?
 - A) 1700cm^{-1} B) 2100cm^{-1}
 - C) 2250cm^{-1} D) 3230cm^{-1}
- 43) Which of following is the correct descending order of bond strength?
 - A) C = C > C = O > CC > CN
 - B) C = C > CC > C = O > CN
 - $C) \quad CN > C = O > CC > C = C$
 - D) CN > CC > C = O > C = C
- 44) What is the major clinical use of selective serotonin reuptake inhibitors?
 - A) Analgesics B) Anti-obesity agents
 - C) Antidepressants D) Antimigraine agents
- 45) What role does the acetoxy group at the 3-position of cephalosporins have in enhancing antibacterial activity
 - A) It acts as a steric shield and masks enzymatic attack at the β -lactam ring.
 - B) It acts as a good leaving group when the β -lactam ring is opened.
 - C) It takes part in a trans-esterification reaction with the carboxylic acid group at position 4.
 - D) It increases the reactivity of the β -lactam ring by neighbouring group participation.
- 46) Which of the following has increased efficiency of UPLC as per Van Deemter equation?
 - A) Particle size B) Flow rate
 - C) Length of column D) HETP

- 47) Which of the following bonds would show the strongest absorption in the IR?
 - A) Carbon-hydrogen B) Oxygen-hydrogen
 - C) Nitrogen-hydrogen D) Sulfur-hydrogen
- 48) Instead of anhydrous lactose, lactose monohydrate is used as an excipient in design of tablet formulations because,
 - A) Monohydrate form is directly compressible
 - B) It doesn't absorb the moisture
 - C) It has got excellent flowability
 - D) Monohydrate form is inexpensive
- 49) HLB value of Sodium Lauryl Sulphate is
 - A) 40B) 10C) 2.0D) 1.0
- 50) Which of the following observations is INCORRECT?
 - A) Brick-red flame is observed when a calcium compound is heated in a Bunsen flame.
 - B) A silver mirror is observed when propanone is warmed with Tollens reagent in a hot water bath.
 - C) A white fume is observed when hydrogen chloride gas is placed near ammonia gas
 - D) A choking smell of burning sulphur is detected after adding dilute hydrochloric acid to iron (II) sulphite solution.

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Rough Work