# M/P ENT - 32

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

**Day and Date : Friday, 20 - 09 - 2019** **Total Marks : 100**
**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) Which of following is concerned with the question of how many items are to be observed and how the information and data gathered are to be analyzed

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

2) The variables are ones that have a strong continent effect on the relationship between the independent variable and dependent variable. They have potential to modify the direction and magnitude of the above stated association.

A) Moderating variables
B) Inverting variables
C) Extraneous variables
D) None of the above

3) Research conducted to find solution for an immediate problem is _____

A) Fundamental Research
B) Analytical Research
C) Survey
D) Action Research

4) 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

5) The null hypothesis of the sign test is that

A) Half the ranks to be less than the median and half greater than the median
B) Half the ranks to be less than the mean and half greater than the mean
C) The lower half the ranks to have the same mean as the upper half
D) The lower half the ranks to have the same standard deviation as the upper half

6) A Hypothesis which develops while planning the research is

A) Null Hypothesis
B) Working Hypothesis
C) Relational Hypothesis
D) Descriptive Hypothesis

7) The _____ is not used as a measure of association for nominal, nonparametric variables.

A) Chi-square
B) Phi
C) Cramer's V
D) Z score

8) Hypothesis which explain relationship between two variables is

A) Causal
B) Relational
C) Descriptive
D) Tentative

9) _____ which deals with the techiques 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

10) A Hypothesis contributes to the development of _____

A) Theory
B) Generalization
C) Evolution
D) Concept

11) Bibliography means

A) Foot Note
B) Quotations
C) List of Books referred
D) Biography

12) Which of the following measures become larger as the data is more dispersed - the mean, median, range, variance or standard deviation?

A) The mean and the median
B) The median and range
C) The mean, variance and standard deviation
D) The range, variance and standard deviation

13) The first page of the research report is

A) Appendix
B) Bibliography
C) Index
D) Title Page

14) Failure to acknowledge the borrowed material is called (Take and use of others as one's own)

A) Acknowledgement
B) Foot note
C) Index
D) Plagiarism

15) What is the difference between data measured on an interval scale and data measured on a ratio scale?

A) A ratio scale has a true zero point, so zero on the scale corresponds to zero of the concept being measured.

B) An interval scale has a true zero point, so zero on the scale corresponds to zero of the concept being measured.

C) A ratio scale has equal intervals between the points on the scale, whereas an interval scale does not.

D) A ratio scale puts scores into categories, while an interval scale measures on a continuous scale.

16) Sending questionnaire to a respondent with a request to complete and return bypost is called

A) Mail Survey
B) Interview
C) Observation
D) Panel

17) Questionnaire is filled by _____

A) Respondent
B) Everybody
C) Enumerator
D) None of the above

18) Two types of errors associated with hypothesis testing are Type I and Type II. Type II error is committed when

A) We reject a null hypothesis when it is true

B) We accept a null We reject the null hypothesis whilst the alternative hypothesis is true

C) hypothesis when it is not true

D) None of the above

19) 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.

20) Summarizing raw data and displaying them on compact statistical tables for analysis is

A) Tabulation

B) Coding

C) Transcription

D) Editing

21) Good research proposals will always:

A) Consider all possible research that had previously been done on the topic.

B) Focus on addressing the research objectives.

C) Provide respondent names and addresses.

D) Focus on the Harvard style.

22) What is the main advantage of producing a written research proposal?

A) Helps the institution.
B) Informs all interested parties.
C) Helps keep people employed.
D) Helps with credibility.

23) Population Census is an example of _____Research

A) Survey
B) Empirical
C) Clinical
D) Diagnostic

24) In testing a Hypothesis the common error is

A) Type I
B) Type I and II
C) Type II
D) None of these

25) An example of probability sampling is

A) Quota sampling
B) Snow-ball sampling
C) Purposive sampling
D) Lottery method

26) Alkenes show typical electrophilic addition reactions. If an electron withdrawing group is attached to one of the carbons bearing the double bond, what will happen to the mechanism of the addition reaction?

A) It remains electrophilic
B) It becomes free radical addition
C) It becomes pericyclic reaction
D) It becomes nucleophilic

27) The correct order for the basic features of the mass spectrophotometer is

A) Acceleration, deflection, detection, ionization
B) Ionisation, acceleration, deflection, detection
C) Acceleration, Ionisation, deflection, detection
D) Acceleration, deflection, Ionisation, detection

28) The proton NMR of 1-bromopropane consists of

A) Two doublets and a sextet
B) A doublet and septet
C) A singlet, a doublet and a triplet
D) Two triplets and a sextet

29) In reversed-phase HPLC

A) A hydrophilic stationary phase is combined with a polar mobile phase
B) A hydrophobic stationary phase is combined with a non polar mobile phase
C) A hydrophobic stationary phase is combined with polar mobile phase
D) A hydrophilic stationary phase is combined with a non polar mobile phase

30) How do values of $\lambda_{max}$ for the n* $\leftarrow$n transitions vary among a series of conjugated polyenes?

A) Values vary but in no particular pattern.
B) Values shift to longer wavelength as the number C = C double bonds increases.
C) Values shift to shorter wavelength as the number of C = C double bonds increases.
D) Values vary very little.

31) In which of the following example, the n-electrons are not delocalized?

A) Hepta-1, 6-diene
B) An $\alpha,\beta$ unsaturated ketone
C) Allyl anion
D) Buta-1, 3-diene

32) Which of the following arrangements of carbon-carbon double bonds along the backbone of a polyene does *not* correspond to a conjugated system?

A) -C=C-C=C-
B) -C=C-C=C-C=C-C=C-
C) -C=C-C-C=C-
D) -C=C-C=C-C=C-

33) Which of the following shows Fermi Resonance?

A) Aldehyde
B) Ketone
C) Amine
D) Acid

34) Sieve number is the number of meshes in a length of _____ in each transverse direction parallel to the wires.

A) 2 cm
B) 2.45 cm
C) 2.54 cm
D) 5 cm

35) The term "D value" used in sterilization can be best defined as

A) The time in which 90% of the total micro organisms are killed
B) One log cycle decrease in Z value
C) One log cycle decrease in F value
D) $N=N_o10^{-t}$

36) The product commercially produced by animal cell culture is

A) Insulin
B) Tissue plasminogen activator
C) Interferon
D) Hepatitis B vaccine

37) Following substance is used for polishing the tablet in sugar coating of tablets

A) Beeswax
B) Zein
C) Shellac
D) Coconut oil

38) To from the spherical vesicle the critical packing parameter (CPP) of nonionic surfactant or lipids should be

A) <0.5 B) <1

C) 0.5 -1.0 D) >1

39) HLB of Sodium Lauryl Sulphate is

A) 40 B) 10.5

C) 2.0 D) 1.0

40) Fluid Energy Mill works on the following principle/action

A) Cutting B) Impact

C) Pressure D) Attrition and Impact

41) Minimum aqueous solubility of drug to avoid bioavailability problems should be

A) 10% B) 1%

C) 0.1% D) 100%

42) Water Attack test is used to identify

A) Type I Glass

B) Type II Glass

C) Type III Glass

D) Both A & C

43) Triterpenoids are active constituents of

A) Jaborandi B) Rhubarb

C) Stramonium D) Brahmi

44) Aconitine on hydrolysis give

A) Benzoic acid + Acetic acid + Aconine

B) Cinnamic acid + Tropic acid + Aconine

C) Cinnamic acid + Methyl alcohol + Benzoyl Aconine

D) Formic acid + Methyl alcohol + Benzoyl Aconine

45) Bioflavanoids were earlier known as

A) Vitamin M

B) Vitamin P

C) Vitamin Y

D) Vitamin C

46) Vein - islet no. in Alexandrian senna has the range

A) 10 to 15.5

B) 16 to 20.5

C) 25 to 29.5

D) 20 to 24.5

47) Acetylcholine is not used clinically because

A) Rapidly gets destroyed in GIT by enzymes upon oral administration

B) Destroyed in plasma by pseudo cholinesterase & at site of action by true cholinesterase upon parenteral administration

C) Being quaternary ammonium compound does not cross blood brain barrier

D) All of the above

48) Which of the following drug is selective $\alpha$ 1 blocker

A) Prazosin
B) Yohimbine
C) Butoxamine
D) Phenoxybenzamine

49) Non-catecholamine has following advantages over Catecholamine

A) Effective on oral administration
B) Resistant to degradation by MAO and longer duration of action
C) Additional powerful CNS stimulant effect
D) All the above

50) The drug which reduces mental stress & produces calmness of mind along with sedation is called as

A) Hypnotic
B) Mood stabilizer
C) Tranquilizer
D) Psychoanaleptic

**Rough Work**