Seat No. : _____

DA-105

December-2025

IMBA, Sem.-III (NEP Syllabus)

IMBA in Finance (FM) / IMBA in HR and Public Administration (HRPA) / IMBA in Business Management (BM)

DPPG-IMBA-DSC-C-233 / DPPG-IMBAF-DSC-C-233 / DPPG-IMBAH-DSC-C-233 : Business Research Methods

Time : 2:00 Hours] **[Max. Marks : 50**

1. Define research and research problem. How is business research different from ordinary research ? What precautions must be taken while defining a problem ? **10**

OR

1. Discuss the features of good research design in details. **10**

2. Explain the concept of cluster sampling and simple random sampling with a real-life example. **10**

OR

2. Explain with examples the four levels of measurement scales: Nominal, Ordinal, Interval, Ratio. **10**

3. A study was conducted to investigate the perception of corporate ethical values among individuals specializing in different areas of marketing. The data below represents the perception scores obtained from three groups : **10**

Group	**Scores**					
Marketing Manager	6	8	7	6	4	9
Marketing Research	5	6	4	3	4	5
Advertising	6	7	6	5	7	8

Using a 5% level of significance, test whether there is a significant difference among the three groups with respect to their perception of corporate ethical values. (F critical value is 3.68)

OR

3. The following table gives the number of accounting clerks committing errors and not committing errors between trained and untrained clerks working in an organisation : **10**

Clerks	Committing Errors	Not Committing Errors	Total
Trained	70	530	600
Untrained	155	745	900
Total	225	1275	1500

Test the effectiveness of training in preventing errors. Use 0.05 level of significance. (Given : Chi-square at 1 d.f. and $\alpha = 0.05 = 3.841$)

4. There are two types of drugs that were tried on some patients for reducing weight. There were 8 adults who were subjected to drug 1 and seven adults who were administered drug 2. The decrease in weight is given below : **10**

Drug 1	10	8	12	14	7	15	13	11
Drug 2	12	10	7	6	12	11	12	

Does the drug differ significantly in their effect on decreasing weight ? You may use 5% level of significance. Assume that the variances of two populations are not same. (For t-critical value refer the t-table given at the end of this paper.)

OR

4. A company selects eight salesmen at random and their sales figures for the previous month are recorded. They then undergo a training course devised by a business consultant, and their sales figures for the following month are compared as shown in the table. Has the training course caused an improvement in the salesmen's ability ? You may use a 0.05 level of significance. (For t- critical value refer the t-table given at the end of this paper.) **10**

Previous month	75	90	94	95	100	90	70	64
Following month	77	101	93	92	105	88	76	68

5. MCQ : (Any **10** out of **12**) **10**

(1) Which of the following best defines Business Research ?
   (a) Collection of data for academic purposes
   (b) Systematic inquiry to solve business problems
   (c) Random gathering of opinions
   (d) Study of past events only

(2) The first step in the research process is
   (a) Data analysis (b) Problem formulation
   (c) Sampling (d) Report writing

(3) Exploratory research design is used when
   (a) The problem is well defined
   (b) The problem is unclear and needs investigation
   (c) Hypothesis testing is required
   (d) Quantitative data is already available

(4) Descriptive research design mainly aims to
   (a) Explore new ideas
   (b) Describe characteristics of a population or phenomenon
   (c) Establish cause-and-effect relationships
   (d) Manipulate variables

(5) In experimental research, the independent variable is
   (a) The variable that changes due to manipulation
   (b) The variable that causes the change
   (c) The variable that cannot be measured
   (d) The constant factor

(6) The main difference between a census and a sample survey is
   (a) Census studies are only a part of the population
   (b) Census studies for the entire population
   (c) Sample surveys are always more accurate
   (d) Census is based on non-probability sampling

(7) Stratified random sampling is most useful when
   (a) The population is homogeneous
   (b) The population has distinct subgroups
   (c) The researcher lacks sampling frames
   (d) Sampling is done without replacement

(8) Validity of a measurement tool means
   (a) It measures what it is intended to measure
   (b) It gives consistent results
   (c) It is free from error
   (d) It is reliable but not valid

(9) The Nominal scale of measurement is used for
   (a) Ranking preferences (b) Categorizing data without order
   (c) Measuring differences in magnitude (d) Measuring zero-point ratios

(10) A hypothesis is
   (a) A statement that can be tested statistically
   (b) A definite conclusion
   (c) Always true
   (d) An assumption that cannot be tested

(11) The Type I error occurs when
   (a) A true null hypothesis is rejected (b) A false null hypothesis is accepted
   (c) The sample size is too small (d) The alternative hypothesis is ignored

(12) The critical region in hypothesis testing refers to
   (a) The area where H_0 is rejected (b) The acceptance region
   (c) A non-sampling error zone (d) A population variance

cum. prob	$t_{.50}$	$t_{.75}$	$t_{.80}$	$t_{.85}$	$t_{.90}$	$t_{.95}$	$t_{.975}$	$t_{.99}$	$t_{.995}$	$t_{.999}$	$t_{.9995}$
one-tail	0.50	0.25	0.20	0.15	0.10	0.05	0.025	0.01	0.005	0.001	0.0005
two-tails	1.00	0.50	0.40	0.30	0.20	0.10	0.05	0.02	0.01	0.002	0.001
df											
1	0.000	1.000	1.376	1.963	3.078	6.314	12.71	31.82	63.66	318.31	636.62
2	0.000	0.816	1.061	1.386	1.886	2.920	4.303	6.965	9.925	22.327	31.599
3	0.000	0.765	0.978	1.250	1.638	2.353	3.182	4.541	5.841	10.215	12.924
4	0.000	0.741	0.941	1.190	1.533	2.132	2.776	3.747	4.604	7.173	8.610
5	0.000	0.727	0.920	1.156	1.476	2.015	2.571	3.365	4.032	5.893	6.869
6	0.000	0.718	0.906	1.134	1.440	1.943	2.447	3.143	3.707	5.208	5.959
7	0.000	0.711	0.896	1.119	1.415	1.895	2.365	2.998	3.499	4.785	5.408
8	0.000	0.706	0.889	1.108	1.397	1.860	2.306	2.896	3.355	4.501	5.041
9	0.000	0.703	0.883	1.100	1.383	1.833	2.262	2.821	3.250	4.297	4.781
10	0.000	0.700	0.879	1.093	1.372	1.812	2.228	2.764	3.169	4.144	4.587
11	0.000	0.697	0.876	1.088	1.363	1.796	2.201	2.718	3.106	4.025	4.437
12	0.000	0.695	0.873	1.083	1.356	1.782	2.179	2.681	3.055	3.930	4.318
13	0.000	0.694	0.870	1.079	1.350	1.771	2.160	2.650	3.012	3.852	4.221
14	0.000	0.692	0.868	1.076	1.345	1.761	2.145	2.624	2.977	3.787	4.140
15	0.000	0.691	0.866	1.074	1.341	1.753	2.131	2.602	2.947	3.733	4.073
16	0.000	0.690	0.865	1.071	1.337	1.746	2.120	2.583	2.921	3.686	4.015
17	0.000	0.689	0.863	1.069	1.333	1.740	2.110	2.567	2.898	3.646	3.965
18	0.000	0.688	0.862	1.067	1.330	1.734	2.101	2.552	2.878	3.610	3.922
19	0.000	0.688	0.861	1.066	1.328	1.729	2.093	2.539	2.861	3.579	3.883
20	0.000	0.687	0.860	1.064	1.325	1.725	2.086	2.528	2.845	3.552	3.850
21	0.000	0.686	0.859	1.063	1.323	1.721	2.080	2.518	2.831	3.527	3.819
22	0.000	0.686	0.858	1.061	1.321	1.717	2.074	2.508	2.819	3.505	3.792
23	0.000	0.685	0.858	1.060	1.319	1.714	2.069	2.500	2.807	3.485	3.768
24	0.000	0.685	0.857	1.059	1.318	1.711	2.064	2.492	2.797	3.467	3.745
25	0.000	0.684	0.856	1.058	1.316	1.708	2.060	2.485	2.787	3.450	3.725