



Final exam 2020



# COMMUNITY MEDICINE

DOCTOR 2019 | MEDICINE | JU

1. All of the following statements about Scientific Management Theory are correct EXCEPT:
- It states that jobs should be designed so that each worker has a well-specified task.
  - It promotes collaboration between managers and their staff to meet goals.
  - In order to increase organisational efficiency, employees should be encouraged to develop their own best way to perform a given job.
  - There should be a complete harmony and cordial relationship between the management and employees.
  - It emphasizes on finding the "the one best way" to perform a given job and the development of each person to his or her greatest efficiency and prosperity.

Answer:a

2. In a study that compared hemoglobin level between smokers and non-smokers, the calculated  $t = 2.15$ ,  $df = 10$ . and  $\alpha = .05$ , Based on this section of ( t )test critical value

df	$\alpha$			
	0.250	0.100	0.050	0.025
1	1.000	3.078	6.314	12.706
2	0.816	1.886	2.920	4.303
3	0.765	1.638	2.353	3.182
4	0.741	1.533	2.132	2.776
5	0.727	1.476	2.015	2.571
6	0.718	1.440	1.943	2.447
7	0.711	1.415	1.895	2.365
8	0.706	1.397	1.860	2.306
9	0.703	1.383	1.833	2.262
10	0.700	1.372	1.812	2.228
11	0.697	1.363	1.796	2.201

table, pick the correct statement:

- We are 5% confident that there is a NO difference in hemoglobin level between smokers and non-smokers, on the population level.
- We are 95% confident that there is a NO difference in hemoglobin level between smokers and non-smokers, on the population level.
- We are 95% confident that there is a statistically significant difference in hemoglobin level between smokers and non- smokers, on the population level.
- We are 99.5% confident that there is a statistically significant difference in hemoglobin level between smokers and non- smokers, on the population level.

Answer:c

3. The women's Hemoglobin level in Jordan is normally distributed, with a mean of 13.75 g/dl and a standard deviation of 1 g/dl. If a woman with a Hemoglobin level of 11.99 g/dl or less is considered anemic, what is the percentage of anemic women in Jordan?

$[z = (x - \mu) / \sigma]$ . Use the section of Z-Table below.

z	.00	.01	.02	.03	.04	.05	.06	.07	.08
-3.4	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003
-3.3	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0004	.0004
-3.2	.0007	.0007	.0006	.0006	.0006	.0006	.0006	.0005	.0005
-3.1	.0010	.0009	.0009	.0009	.0008	.0008	.0008	.0008	.0007
-3.0	.0013	.0013	.0013	.0012	.0012	.0011	.0011	.0011	.0010
-2.9	.0019	.0018	.0018	.0017	.0016	.0016	.0015	.0015	.0014
-2.8	.0026	.0025	.0024	.0023	.0023	.0022	.0021	.0021	.0020
-2.7	.0035	.0034	.0033	.0032	.0031	.0030	.0029	.0028	.0027
-2.6	.0047	.0045	.0044	.0043	.0041	.0040	.0039	.0038	.0037
-2.5	.0062	.0060	.0059	.0057	.0055	.0054	.0052	.0051	.0049
-2.4	.0082	.0080	.0078	.0075	.0073	.0071	.0069	.0068	.0066
-2.3	.0107	.0104	.0102	.0099	.0096	.0094	.0091	.0089	.0087
-2.2	.0139	.0136	.0132	.0129	.0125	.0122	.0119	.0116	.0113
-2.1	.0179	.0174	.0170	.0166	.0162	.0158	.0154	.0150	.0146
-2.0	.0228	.0222	.0217	.0212	.0207	.0202	.0197	.0192	.0188
-1.9	.0287	.0281	.0274	.0268	.0262	.0256	.0250	.0244	.0239
-1.8	.0359	.0351	.0344	.0336	.0329	.0322	.0314	.0307	.0301
-1.7	.0446	.0436	.0427	.0418	.0409	.0401	.0392	.0384	.0375
-1.6	.0548	.0537	.0526	.0516	.0505	.0495	.0485	.0475	.0465
-1.5	.0668	.0655	.0643	.0630	.0618	.0606	.0594	.0582	.0571
-1.4	.0808	.0793	.0778	.0764	.0749	.0735	.0721	.0708	.0694
-1.3	.0968	.0951	.0934	.0918	.0901	.0885	.0869	.0853	.0838
-1.2	.1151	.1131	.1112	.1093	.1075	.1056	.1038	.1020	.1003
-1.1	.1357	.1335	.1314	.1292	.1271	.1251	.1230	.1210	.1190
-1.0	.1587	.1562	.1539	.1515	.1492	.1469	.1446	.1423	.1401

- a. .4%
- b. .039%
- c. 39.2%
- d. 3.92%
- e. .04%

Answer:d

4. To determine the effectiveness of influenza vaccines in elderly people, a group of vaccinated elderly, and another group of unvaccinated elderly were studied. They were followed up to for developing influenza. The results suggest that the elderly who are vaccinated had a reduced risk of hospitalization for pneumonia. What study design is this?

- a. Case-control study
- b. Ecological study.
- c. Randomized controlled clinical trial (RCT).
- d. Cross-sectional
- e. Cohort study

Answer:e

5. All of the following statements are correct regarding parametric statistics, EXCEPT?
- Parametric statistics require quantitative measurements that yield interval or ratio level data in the dependent variable
  - Parametric statistics are based on fewer assumptions about the population than non-parametric statistics.
  - Parametric techniques are more powerful and more flexible than nonparametric techniques.
  - Paired sample t test is an example of parametric statistics.
  - Parametric statistics assume that data being analyzed are randomly selected from a normally distributed population.

Answer:b

6. If you belong to a normally distributed population with a mean height of 160 cm, and a standard deviation of 10 cm. What is the probability that your height is 160 cm or taller?
- 68%
  - 99.7%
  - 100%
  - Cannot be determined
  - 50%

Answer:e

7. Which of the following statements is correct regarding measures of central tendency?
- Mean, median, and mode are always different regardless of normality.
  - Median is the same as Q1.
  - A sample can only have one mode
  - Mean, median, and mode are always the same regardless of normality.
  - Mean is more sensitive to extreme values than median.

Answer:e

8. Which of the following sentences is INCORRECT about screening tests
- Screening is usually applied to asymptomatic people.
  - Specificity is the probability of correctly classifying a healthy person.
  - Sensitivity is the proportion of those tested who are correctly classified by the test.
  - The ultimate objective of screening test is to reduce mortality and morbidity.
  - A screening test must be accurate, which means to be reliable and valid

Answer:c

9. A researcher calculated the value of chi-square to be 6.35. If  $df = 2$ , and  $\alpha = .10$ . Use this section of chi-square critical value table to pick the correct statement of the followings:
- Critical value of chi-square is smaller than calculated value of chi-square. Thus, reject null

	$P(X \leq x)$						
	0.010	0.025	0.050	0.100	0.900	0.950	0.975
$r$	$\chi^2_{0.99}(r)$	$\chi^2_{0.975}(r)$	$\chi^2_{0.95}(r)$	$\chi^2_{0.90}(r)$	$\chi^2_{0.10}(r)$	$\chi^2_{0.05}(r)$	$\chi^2_{0.025}(r)$
1	0.000	0.001	0.004	0.016	2.706	3.841	5.024
2	0.020	0.051	0.103	0.211	4.605	5.991	7.378
3	0.115	0.216	0.352	0.584	6.251	7.815	9.348
4	0.297	0.484	0.711	1.064	7.779	9.488	11.14
5	0.554	0.831	1.145	1.610	9.236	11.07	12.83
6	0.872	1.237	1.635	2.204	10.64	12.59	14.45
7	1.239	1.690	2.167	2.833	12.02	14.07	16.01
8	1.646	2.180	2.733	3.490	13.36	15.51	17.54
9	2.088	2.700	3.325	4.168	14.68	16.92	19.02
10	2.558	3.247	3.940	4.865	15.99	18.31	20.48

hypothesis.

b. Critical value of chi-square is smaller than calculated value of chi-square. Thus, keep null hypothesis.

c. Critical value of chi-square is greater than calculated value of chi-square. Thus, keep null hypothesis.

d. Given these data, the researcher is unable to decide whether there is a statistically significant association.

e. Critical value of chi-square is greater than calculated value of chi-square. Thus, reject null hypothesis.

Answer:a

10. When a researcher accepts null hypothesis when it is in fact false, then the researcher did:

a. The wrong thing; type II error.

b. The wrong thing; type alpha error.

c. The wrong thing; type I error.

d. The wrong thing; standard error.

e. The right thing.

Answer:a

11. A researcher needed to recruit a sample of 120 mothers of Children with autism. The researcher visited an autism center and recruited 24 women, and asked each of them to connect him with other mothers of kids with autism, and so on. Until the sample size was reached, this is an example of ?

a. Snowball sampling

b. Cluster sampling

c. Stratified sampling.

d. Convenience sampling.

e. Simple random sampling.

Answer:a

12. Transactional leaders:

a. Reward followers for good behaviour and punish followers for poor behaviour.

b. Engage in the behaviours they expect of their colleagues and subordinates.

c. Engage their colleagues and subordinates whenever possible in decision making.

d. Recognise that members of the team are unique individuals each with his or her own set

of strengths, challenges, goals, and values.

e. Motivate followers by providing them with meaningful and challenging work.

Answer:

13 Which of the following SWOT elements are internal factors for a business?

a. Opportunities and Weaknesses.

b. Opportunities and Threats.

c. Weaknesses and Threats.

d. Strengths and Opportunities.

e. Strengths and Weaknesses.

Answer:e

14 The men's Body Mass Index (BMI) in Jordan is normally distributed with a mean of 22.8 and a standard deviation of 4. If a man is considered overweight if his BMI is between 25 - 30, what is the probability of randomly picking an overweight Jordanian man?

Use the section of Z-Table below.

$$[Z = (X - \mu) / \sigma]$$

z	.00	.01	.02	.03	.04	.05	.06	.07	.08
0.0	.5000	.5040	.5080	.5120	.5160	.5199	.5239	.5279	.5319
0.1	.5398	.5438	.5478	.5517	.5557	.5596	.5636	.5675	.5714
0.2	.5793	.5832	.5871	.5910	.5948	.5987	.6026	.6064	.6103
0.3	.6179	.6217	.6255	.6293	.6331	.6368	.6406	.6443	.6480
0.4	.6554	.6591	.6628	.6664	.6700	.6736	.6772	.6808	.6844
0.5	.6915	.6950	.6985	.7019	.7054	.7088	.7123	.7157	.7190
0.6	.7257	.7291	.7324	.7357	.7389	.7422	.7454	.7486	.7517
0.7	.7580	.7611	.7642	.7673	.7704	.7734	.7764	.7794	.7823
0.8	.7881	.7910	.7939	.7967	.7995	.8023	.8051	.8078	.8106
0.9	.8159	.8186	.8212	.8238	.8264	.8289	.8315	.8340	.8365
1.0	.8413	.8438	.8461	.8485	.8508	.8531	.8554	.8577	.8599
1.1	.8643	.8665	.8686	.8708	.8729	.8749	.8770	.8790	.8810
1.2	.8849	.8869	.8888	.8907	.8925	.8944	.8962	.8980	.8997
1.3	.9032	.9049	.9066	.9082	.9099	.9115	.9131	.9147	.9162
1.4	.9192	.9207	.9222	.9236	.9251	.9265	.9279	.9292	.9306
1.5	.9332	.9345	.9357	.9370	.9382	.9394	.9406	.9418	.9429
1.6	.9452	.9463	.9474	.9484	.9495	.9505	.9515	.9525	.9535
1.7	.9554	.9564	.9573	.9582	.9591	.9599	.9608	.9616	.9625
1.8	.9641	.9649	.9656	.9664	.9671	.9678	.9686	.9693	.9699
1.9	.9713	.9719	.9726	.9732	.9738	.9744	.9750	.9756	.9761
2.0	.9772	.9778	.9783	.9788	.9793	.9798	.9803	.9808	.9812

a. 25.53%

b. 2.553%

c. .2553%

d. 56.89%

e. 5.689%

Answer:a

15 Malik (a 17-year-old African American boy) was born and lived in Houston, Texas in the US with his single mother. They lived in a poor neighborhood with high crime rate. Now he is involved with gangs and dealing with drugs. He was diagnosed with hepatitis B recently. In

your opinion, what is the environmental factor that contributed for his infection?

- a. Ethnicity, belonging to African American ethnic group in the us
- b. Poverty and poor housing, where he lived
- c. Individual habits and practices, made him susceptible to Hepatitis B
- d. Hepatitis B virus, transmitted to him through drug injections
- e. Gender, being male

Answer:b

16. Which of the following does NOT affect the prevalence of a disease in a population?

- a. A new preventive program was implemented
- b. Higher death rate of the disease
- c. A new medication to relieve symptoms of the disease
- d. Higher recovery rate of a disease
- e. A new medication was discovered for treatment of cases

Answer:c

17. The highest level of variable measurement in which zero means a complete absence of the measured quantity is?

- a. Nominal.
- b. Categorical.
- c. Ratio.
- d. Ordinal.
- e. Interval.

Answer:c

18. A mission statement is a statement of the organisation's:

- a. Code of ethics.
- b. Purpose.
- c. Structure.
- d. Culture.
- e. Net worth

Answer:b

19. Which of the following does NOT apply to the distribution of a disease?

- a. Place distribution studies geographical pathology indicating national differences.
- b. Minamata disease in Japan represented continuous exposure to asbestos.
- c. Distribution relates to pattern of disease in terms of person, place and time.
- d. Influenza is an example of cyclic periodic fluctuation every 7- 10 years.
- e. Smoking is a person (host characteristic) related to distribution.

Answer:c

20. The best decision given the following SPSS chi-square output of the relationship

between age group (young adult, mid-age adult, older adult) and depression (depressed or not depressed) is to:

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.821 <sup>a</sup>	2	.244
Likelihood Ratio	2.815	2	.245
Linear-by-Linear Association	.832	1	.362
N of Valid Cases	606		

- a. Reject null hypothesis.
- b. There is a statistically significant association between age group and depression.
- c. Missing data.
- d. Keep null hypothesis.
- e. \_\_\_

Answer:d

21. Which of the following statements is correct regarding variance?

- a. It is one of the measures of location.
- b. It is used in the calculation of standard error in some inferential statistical tests.
- c. It is the square root of standard deviation.
- d. It appears in the 5-number summary.
- e. It is easily influenced by extreme values.

Answer:e

22. Which of the following is NOT a characteristic of the prevalence of a disease?

- a. It can be used to help determine the health care needs of a community
- b. It includes all of the existing cases of disease in a community
- c. It depends on the incidence of disease
- d. It measures the rapidity with which new cases arise
- e. It changes with the duration of the disease

Answer:d

23. What is the probability distribution table that should be used to predict the value of a discrete random variable which can assume a value between 0 and infinity?

- a. Poisson distribution table
- b. Pearson's Chi-square distribution table
- c. Normal distribution table
- d. Binomial distribution table
- e. Student's (t) test distribution table

Answer:a

24. In a study to determine whether aphthous ulcer is associated with subsequent development of carcinoma, the estimated relative risk for those with prior aphthous ulcer



compared to those who did not have an aphthous ulcer was found to be 3.1. From this we can conclude:

- a. Aphthous ulcer appears to protect against the development of carcinoma.
- b. The case fatality rate is higher among patients who have had a prior aphthous ulcer.
- c. We cannot draw any conclusions from these data.
- d. Aphthous ulcer should not be assumed to increase the risk of carcinoma.
- e. The incidence of carcinoma is higher among those who have had a prior aphthous ulcer.

Answer:e

25. A researcher wants to compare mean pain score (tested on a scale from 1-100) between 3 groups; 1st degree burn patients, 2nd degree burn patients, and 3rd degree burn patients. The appropriate test statistic to use is?

- a. Paired-sample t test.
- b. Kruskal Wallis H.
- c. Pearson's Chi-square
- d. Mann Whitney U.
- e. Independent samples t test.

Answer:b

26. The mean body weight was compared between sample 1 and sample 2. The SPSS output below shows the results. If  $\alpha = .01$ , what is the best interpretation?

Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Dev.
TIME	Equal variances assumed	.130	.729	-2.958	7	.021	-6.0000	
	Equal variances not assumed			-3.000	6.857	.020	-6.0000	

- a. We are 90% confident that there is a statistically significant difference in mean body weight between population 1 and population 2.
- b. We are 99% confident that there is a statistically significant difference in mean body weight between population 1 and population 2.
- c. We are 99% confident that there is NO difference in mean body weight between population 1 and population 2.
- d. Levene's test is significant, so assumptions were not met.
- e. Reject null hypothesis.

Answer:c

27. A researcher wants to conduct a study regarding the psychological wellness of all university students in Jordan. He randomly selected 3 universities from the north, the center and the south, in each university he randomly picked 1000 students. Which of the followings is his reference population?

- a. The 3 randomly picked universities

- b. All Jordanian university students
- c. The 3000 randomly picked students
- d. All students in these 3 universities
- e. The 1000 randomly picked students

Answer:b

28. From the example of the person who had an accident in the "What is Public Health" video; which of the following sentences is INCORRECT?

- a. Public health is concerned about social support this person has to help in recovery.
- b. Public health is concerned about what caused the accident.
- c. The physician should start investigating how and why the accident happened.
- d. Public health approach will study the issue of driving under the influence of alcohol.
- e. The physician is not concerned with the educational level of the patient.

Answer:c

29. The role of Tubercle Bacilli bacteria in developing tuberculosis, is an example of which of the following types of causal relationships ?

- a. Necessary and sufficient
- b. All of the options can apply to influenza virus
- c. Sufficient but not necessary
- d. Neither necessary nor sufficient
- e. Necessary but not sufficient

Answer:e

30. Fill in the blank For herd immunity to occur. It is estimated that ..... of the population must be immune before measles can be controlled

- a 78%
- b 94%
- c. 55%
- d. 100%
- e. 23%

Answer:b

31. Related to the community transmission of SARS-CoV-2 case reported by the CDC, which of the following sentences is correct?

- a. Recommendations include staying at home when required by authorities.
- b. The investigation included a cluster of 35 confirmed cases of COVID- 19.
- c. Investigation was in Chicago, where 12 deaths were reported in one family
- d. It is safe to have family gatherings like funerals and birthday parties with social distancing.
- e. Person-to-person transmission was traced to gatherings in schools and shopping places.

Answer:a

32. Which of the following statements is correct regarding quota sampling?
- a. It takes whole groups (clusters) of people into the sample randomly.
  - b. It guarantees an equal chance for all sampling frame members to be picked
  - c. It intentionally oversamples some minorities.
  - d. It respects and preserves real-life proportions in the population.
  - e. It is one of the probability sampling techniques.

Answer:b

33. A and B are independent samples. If sample A has 9 patients, and sample B has 10 patients, then degrees of freedom of this independent-sample t test equal?

- a. 17
- b. 1
- c. 18
- d. 19
- e. 2

Answer:a

34. Describing the case of Legionnaire's Disease, which of the following sentences refers to the "Application" part in the definition of epidemiology?

- a. Results of a case-control study indicated that spending time in the lobby of Hotel A was a risk factor.
- b. The investigation lead to development of new regulations for climate control systems.
- c. July 21 through 24, 1976, in Philadelphia, a large number of attendees were admitted to hospital.
- d. During July 26 to August 1, a total of 18 conventioners died from severe pneumonia.
- e. In January 1977, the Legionella bacterium was identified and isolated.

Answer:b

35. Which the following theories existed before the invention of the microscope?

- a. Classic Epidemiological theory
- b. Miasma theory
- c. Gems theory
- d. Multifactorial theory.
- e. Henle-Koch theory

Answer:b

36. In a normally-distributed population, \_\_\_\_\_% of values are located between 2.5 standard deviations away from the mean in either side?

- a. 95
- b. 99
- c. 99.7

- d. 68
- e. 99.9

Answer:b

37. In a study investigating the effect of physical exercise on developing diabetes, there were big differences in levels of hypertension among men in each of five different levels of physical exercise. This applies mostly to which of Hill's criteria?

- a. Specificity
- b. Strength of association
- c. Consistency
- d. Temporality
- e. Biological gradient

Answer:

38. In the Roseto village case from OUTLIERS for Malcolm Gladwell, the reason why Dr. Wolf found very low rate of heart disease among residents of Roseto was:

- a. Their social structure and community, which reduced pressure from the modern world.
- b. Healthy Italian dietary practices, such as thin crust pizza with tomatoes and onions.
- c. They woke up at dawn to do yoga and run six miles every day.
- d. Their genes, since they were Italian immigrants.
- e. The healthy environment where they lived, in the foothills of Pennsylvania.

Answer:

39. The building blocks of the WHO's Health System Framework include all of the following EXCEPT:

- a. Financing.
- b. Information.
- c. Health workforce.
- d. Community engagement.
- e. Leadership and governance.

Answer:d

40. A researcher wants compare mean blood glucose level in 3 samples; type I diabetic patients, type II diabetes patients, and healthy people, the appropriate test statistic to use is?

- a. Non-parametric; Kruskal Wallis H.
- b. Non-parametric; Pearson's Chi-square
- c. Parametric; independent samples t test.
- d. Parametric; analysis of variance (ANOVA).
- e. Parametric; paired sample t test.

Answer:d

41. Which of the following is INCORRECT about Bias and confounding?

- a. Bias can result in association that does not truly exist.
- b. Bias is a systematic error in a study and cannot be fixed if introduced into the study.
- c. Confounding can be avoided in the analysis stage by randomization
- d. When confounding variables are known, the effect may be fixed.
- e. Bias affects validity of the study

Answer:c

42. It is recommended in the literature on employees' motivation to give employees-----compliment(s) for every criticism.

- a.2
- b.5
- c. 1
- d.4
- e.3

Answer:e

43. Which of the following sentences is correct about the natural history of disease?

- a. Carriers are persons with incubating disease or inapparent infection, but cannot infect others.
- b. Persons with influenza are not infectious before the onset of symptoms.
- c. Carriers are persons who appear to have recovered from their illness but remain infectious.
- d. All cases of disease progress to the clinical stage.
- e. Cases diagnosed by clinicians in the community represent the base of the iceberg.

Answer:c

44. A researcher studied the association between gender (male or female) and marital status (single, married, divorced, or widow) using Chi-square, the degrees of freedom in this test equal?

- a. 3
- b. 1
- c. 2
- d. 5
- e. 4

Answer:a

45. Which of the following statements is correct regarding dependent- sample t test?

- a. It is used to compare means between two separate groups of people
- b. It has the same t calc. equation as independent-sample t test
- c. Its degrees of freedom equal number of individuals - 1
- d. Its degrees of freedom equal number of pairs - 1

e. It is used to compare means between three or more separate groups of people

Answer:d

46. The function of management that concentrates on initiating action in the organization through effective leadership and motivation of, and communication with subordinates is:

- a. Controlling.
- b. Planning.
- c. Organising.
- d. Staffing.
- e. Directing.

Answer:e

47. In Public Health ,and as a control measure ,using the covid-19 vaccine during covid-19 pandemic is directed against which of the following parts of the Chain of Infection?

- a. Susceptible host
- b. mode of transmission
- c. portal of exit
- d. portal of entry
- e. reservoir

Answer:a

48. British investigators conducted a study to compare history of childhood immunization among 2,013 children with attention deficit hyperactivity disorder (ADHS) and 4,209 children without such disorders (They found no association.) This is an example of which type of study?

- a. Descriptive
- b. Clinical trial
- c. Case-control
- d. Cohort
- e. Experimental

Answer:c

49. A researcher tested the association between alcohol use and liver failure using independent sample t test. He was 95% confident that there is a significant association between the two variables on the population level. Which of the following values of t proves his conclusion?

- a. t calc.=4.120 and t CV =4.676.
- b. t calc. =3.578 and t CV =0.188.
- c. t calc. =3.578 and t CV =4.676.
- d. t calc. =3.019, p = .075
- e. t calc. =4.120, p = .490

Answer:c

50. Expectancy Theory is related with the name of:

- a. Locke.
- b. Donabedian.
- c. Adam.
- d. Taylor.
- e. Vroom.

Answer:e

51. A researcher provided her sample results regarding family monthly income in the form of a 5-number summary as follows: [JD 275, JD 375, JD 475, JD 675, JD 1225] .The results of this sample can be described as?

- a. Standardized
- b. Symmetric
- c. Normally distributed
- d. Skewed to the left.
- e. Skewed to the right.

Answer:e

52. Odds Ratio (OR) is the best measure of association in which of the following studies:

- a. Prospective cohort study.
- b. Case report study.
- c. Ecological study.
- d. Cohort study because we can calculate incidence.
- e. Case-control study because we can only calculate prevalence.

Answer:e

53. Which of the following is correct about Framingham Heart Study?

- a. The study ended in 2016
- b. Nearly 5200 people participated throughout the life time of the study.
- c. It is a longitudinal experimental study that started in 1948.
- d. Framingham was the name of the physician who started the study.
- e. Some of the main risk factors identified were hypertension and diet.

Answer:b

54. What do we call an individual sample member whose X is located one-fifth the range from the left?

- a. The median
- b. The first decile
- c. The first quartile
- d. The second quintile
- e. The twentieth percentile

Answer:e

55. Which of the following is an example related to the chain of infection?

- a. COVID-19 is an example for gastrointestinal route of entry.
- b. Syphilis is an example for respiratory tract as portal of entry.
- c. Cough reflex in an example of nonspecific immunity in a susceptible host.
- d. Legionnaire disease is an example for animal reservoir.
- e. Non-sterile surgical scalpel is an example for direct transmission of Hepatitis B.

Answer:c

56. Which of the following is a descriptive epidemiological study design?

- a. Cohort
- b. Experimental
- c. Case-control
- d. Community trial
- e. Ecological

Answer:e

57. Which of the following is INCORRECT regarding cross-sectional study?

- a. Temporal sequence cannot be determined.
- b. More expensive than other observational designs.
- c. Useful for generating new hypothesis
- d. It is an observational study design.
- e. Best design to use for disease with long duration of expression.

Answer:b

58. Which of the following sentences is correct regarding the John Snow investigation about what caused cholera?

- a. Snow conducted a classical study in 1954 when an epidemic of cholera developed in London.
- b. Snow believed that water was the cause of infection for cholera, but he could not identify the exact source of water.
- c. Snow determined where in London persons with cholera lived and worked. He then mapped distribution of disease.
- d. Farr agreed with Snow about the cause of cholera. They adhered to the miasmatic theory of diseases.
- e. Using the microscope, snow conducted his investigations to discover what caused cholera.

Answer:c

59. Which of the following is one of the hygiene factors identified by Herzberg?

- a. Working conditions.



- b. Advancement
- c. Recognition.
- d. Responsibility.
- e. Achievement.

Answer:a

60. According to Maslow's hierarchy of needs, if a person's esteem needs have been satisfied, then it is safe to assume that all of the following needs have also been satisfied EXCEPT:

- a. Belonging.
- b. Employment.
- c. Autonomy.
- d. Safety.
- e. Affection.

Answer:c

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