



श्री चित्रा तिरुनाल आयुर्विज्ञान और प्रौद्योगिकी संस्थान, त्रिवेंद्रम, केरल- 695 011
(एक राष्ट्रीय महत्व का संस्थान, विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार)
SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES AND TECHNOLOGY, TRIVANDRUM
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ENTRANCE EXAMINATION - ACADEMIC SESSION JANUARY 2025

Program: PhD(Health Sciences) – Fulltime & Parttime

Time:90 Minutes

Max. Marks: 100

(Select the most appropriate answer)

(There are **no negative** marks for wrong answers)

1	Randomised, controlled trials provide strong evidence that an observed effect is due to the intervention (the assigned exposure). One reason is because
a	The study participants are volunteers and therefore motivated to take part in the study.
b	The exposure level and the outcome are measured at the same time.
c	It is easier to measure the outcome variable with great precision in randomised, controlled trials compared to in other study designs.
d	When the participants are randomised, many characteristics and possible confounding factors are likely to be evenly distributed in the groups.
2	The difference between measures and indicators is that:
a	Measures are unambiguous quantities, whereas indicators are devised from common sense understandings
b	Indicators have a more direct relationship to the underlying concept than measures
c	Measures are intuitively devised and then applied as if they were direct indicators of a concept
d	Indicators are unambiguous quantities, whereas measures are subjective and value-laden
3	The split-half method is used as a test of:
a	Stability
b	Internal reliability
c	Inter-observer consistency
d	External validity
4	Which of the following is not a form of measurement validity?
a	Concurrent validity
b	Face validity
c	Conductive validity
d	Convergent validity
5	In validity research, a behavior is called a/an
a	coefficient.
b	criterion.
c	alpha.

	d	ratio.
6	Ramu goes out to a professor-rating website and gives his psychology teacher 2 of 4 stars. The star rating system used by this website is an example of a/an _____ scale.	
	a	nominal
	b	interval
	c	ratio
	d	Ordinal
7	Which of the following is not a diagrammatic representation of data?	
	a	Pie Chart
	b	Line Graph
	c	Correlation
	d	Scatter plot
8	In a class of 25 students with roll numbers 1 to 25, a student is picked up at random to answer a question. Find the probability that the roll number of the selected student is either multiple of 5 or 7.	
	a	6/25
	b	4/25
	c	8/25
	d	7/25
9	A ratio of two standardized death rates is called _____	
	a	Comparative Mortality Ratio
	b	Standardized Mortality Ratio
	c	Crude Death Rate
	d	Total Fertility Rate
10	The difference between the actual Y values and the predicted Y values is called _____	
	a	Slop
	b	Residual
	c	Itercept
	d	Coefficient of determination
11	If a variable has a normal distribution, approximately what percentage of the data values will be within Mean-2SD, where SD is the Standard Deviation?	
	a	47.5
	b	95
	c	97.5
	d	68
12	Which regression methods will be used to analyse survival data	
	a	Linear regression
	b	Poisson Regression
	c	Logistic Regression
	d	Cox Regression
13	Patients with acute MI receiving Clotbustase have a 9% mortality rate at 3 months, compared with a 10% mortality rate for Streptokinase. The number needed to treat (NNT) is:	
	a	1
	b	9
	c	60
	d	100

14	Which of the following is not available in a box-plot?	
	a	Median
	b	First-quartile
	c	Mean
	d	Range
15	Which one of the following may be considered as more accurate estimate? scenario 1. A prevalence of 10% from a sample of size 20 would have a 95% confidence interval (CI) of (1%, 31%); scenario 2. A prevalence of 10% from a sample of size 400 would ha	
	a	scenario1
	b	scenario2
	c	neither 1 nor 2
	d	both 1 and 2
16	How many genes are present in human being?	
	a	10000-15000
	b	20000-25000
	c	30000-35000
	d	40000-45000
17	What is the causative organism of Covid-19?	
	a	MERS-CoV
	b	SADS-CoV
	c	SARS-CoV
	d	SARS-CoV-2
18	What is the name of the Satellite Navigation System developed by India?	
	a	NavIC
	b	GPS
	c	GLONASS
	d	Galileo
19	How much is the global population in 2024?	
	a	6.2 billion
	b	7.2 billion
	c	8.2 billion
	d	9.2 billion
20	Which country has the highest population in the world in 2024?	
	a	China
	b	India
	c	Indonesia
	d	USA
21	Pick the appropriate form indicating a healthy state	
	a	Microbiome
	b	Microbiota
	c	Eubiosis
	d	Dysbiois
22	The 2024 Nobel Prize for Physiology or Medicine is awarded for the pioneering work in the area of -----	
	a	RNA
	b	mRNA
	c	DNA
	d	microRNA

23	Qualitative research methods emerge from which epistemological tradition?
	a Interpretivism
	b Positivism
	c Darwinism
	d Socialism
24	The theory that describes the changes in fertility and mortality rates over time and the impact on the population size in any specific region is called:
	a Theory of fertility change
	b Theory of mortality decline
	c Theory of demographic transition
	d Theory of human transition
25	The most frequently used contraceptive method in the southern states of India, Kerala, Tamilnadu, Karnataka, Andhra Pradesh and Telangana according to the National Family Health Survey 5 is
	a Female sterilization
	b Male sterilization
	c IUCD
	d Condoms
26	A phenomenological approach is common in which kind of research?
	a Survey research
	b Qualitative research
	c Quantitative research
	d Architectural research
27	The Grounded theory approach in qualitative research was first discussed by:
	a Krieger N and Nussbaum M
	b MacKinnon C and Strauss M
	c Barney G and Folbre N
	d Glaser B and Strauss A
28	The Total Fertility Rate is defined as:
	a The average number of births that a woman has during her reproductive period at the completion of her reproduction assuming that none of the births result in an infant death
	b The average number of children a woman would have during her reproductive period assuming the same levels of reproduction across age groups during a specified period and in a specified geographic area
	c The average number of births that a woman would have after adjusting for deaths during the same period assuming that infant deaths occur at the same levels experienced during a specific period in a specified geographical area.
	d The average number of children that are born to a woman adjusted by the average number of deaths she experiences during a specified period and in a specified geographic area
29	Which among the following is not a feature of innate immunity?
	a Non-specific nature
	b Recognise pathogen-associated molecular patterns (PAMP)
	c Immunological memory
	d Rapid action
30	Which of the following is a killed vaccine?
	a BCG vaccine

	b	Varicella vaccine
	c	MMR vaccine
	d	Salk Polio vaccine
31	The alternate form of a gene is known as _____	
	a	Alternate type
	b	Recessive character
	c	Dominant character
	d	Allele
32	Sickle cell anaemia is a/an _____ linked _____ trait.	
	a	autosome, recessive
	b	autosome, dominant
	c	sex chromosome, dominant
	d	sex chromosome, recessive
33	Which of the following is NOT an example of a single-gene inheritance disorder?	
	a	trisomy
	b	Huntington's disease
	c	cystic fibrosis
	d	haemophilia A
34	Which blood cells reproduce HIV and produce progeny viruses?	
	a	Eosinophils
	b	T Helper Cells
	c	B-lymphocytes
	d	Basophils
35	Organization is	
	a	systematic arrangement of equipments and furnitures to accomplish a common goal
	b	systematic arrangement of people to accomplish specific goals
	c	poorly arrange a group of people to accomplish specific goals
	d	None of the above
36	According to Transactional Analysis the best life position is	
	a	I am OK You are not OK
	b	I am not OK You are OK
	c	I am OK You are OK
	d	I am not OK You are not OK
37	Which one of the following is true?	
	a	The person who is involved only in payroll is called HR Manager
	b	Every Manager is HR Manager
	c	Person who is involved only in book keeping is called HR Manager
	d	Person who is only assuming administrative role is a HR Manager
38	In which step of HRM process informs the employees about personnel poicies?	
	a	Recruitment
	b	Selection
	c	Orientation
	d	Deployment
39	In selection stage of HR which one of the following is very reliable and valid method?	
	a	Reference checks
	b	Bio-data
	c	work sample

	d	expert evaluation
40		According to Herzberg's Motivation-Hygiene Theory, 'Organization policy and administration is
	a	Hygiene factor
	b	Motivator
	c	Job dissatisfaction
	d	Job satisfaction
41		Elevated fasting blood sugar (FBS) level is often used to make a diagnosis of Diabetes mellitus. If the cut-off point for diagnosis of diabetes were increased
	a	sensitivity and specificity would increase
	b	sensitivity and specificity would decrease
	c	sensitivity would increase and specificity would decrease
	d	sensitivity would decrease and specificity would increase
42		Chronic Obstructive Pulmonary Disease (COPD) was diagnosed among 20 women and 8 men from a residential colony. We cannot assume that women are at higher risk of COPD because
	a	Women are generally more resilient to any illness
	b	We do not know the denominators
	c	Cohort effect may be present
	d	Sample is biased with more women
43		In Hill's criteria for causal reasoning, the term 'biological gradient' indicates
	a	Dose response relationship
	b	Specificity of association
	c	Spurious association
	d	Consistency over time
44		An ROC curve plots
	a	Sensitivity against Specificity
	b	Specificity against Sensitivity
	c	Sensitivity against 1-Specificity
	d	Specificity against 1-Sensitivity
45		In the Indian health care system, MLSP stands for
	a	Monitoring of LifeStyle Practices
	b	Machine Learning and Simulation Protocols
	c	Medical Logistics and Supplies Planning
	d	Mid Level Service Provider
46		"Three million plan" was a recommendation of _____ committee report
	a	Mashelkar
	b	Bhore
	c	Mudaliar
	d	Kartar Singh
47		The AWaRe classification of the World Health Organization is intended as a tool for monitoring
	a	Drug safety
	b	Adverse events following immunization
	c	Antibiotic prescription
	d	Hospital acquired infections
48		The Alma Ata declaration pertains to
	a	Universal Health Coverage

	b	Polio eradication
	c	Sustainable Development Goals
	d	Primary Health Care
49		COTPA pertains to
	a	Tobacco control
	b	Antibiotic resistance
	c	Insurance coverage
	d	Medical termination of pregnancy
50		The ICDS scheme is implemented primarily through
	a	Health centers
	b	Schools
	c	Anganwadis
	d	Hostels
51		The "A" in RMNCH+A stands for
	a	Anaemia
	b	Awareness
	c	Adolescent
	d	Activism
52		In the Health Policy Triangle the component that is not part of the framework is:
	a	Context
	b	Process
	c	Content
	d	Finances
53		Which of the following is a key component of the Bottom-Up approach of researching implementation
	a	Street Level Bureaucracy
	b	Command and Control Approach
	c	Strict division between policy formulation and Implementation
	d	Clarity of objectives
54		The latest version of India's Health Policy was released in
	a	2021
	b	2017
	c	2014
	d	2023
55		India's First Health Policy was released in
	a	1950
	b	1964
	c	1961
	d	1983
56		In the Commission on Social Determinants of Health Framework the Health System is a:
	a	Structural Determinant
	b	Intermediary Determinant
	c	Fundamental Determinant
	d	Not a determinant
57		In cost Utility analysis valuation of consequences is in
	a	Natural Units
	b	Monetary Units
	c	Healthy years
	d	All of the above

58	A population pyramid with a very broad base suggests a population with a
	a Relatively high death rate
	b Relatively high birth rate
	c Low birth rate
	d Low death rate
59	The Astana Declaration was regarding
	a Primary Health Care
	b Health Financing
	c Climate change and health
	d Information Systems
60	The target for % GDP to be allocated to health as per National Health Policy of India, 2017 is:
	a 1.5% by 2025
	b 2.5% by 2025
	c 3.5% by 2025
	d 4.5% by 2025
61	W20 (Women 20) Inception Meeting on February 27th -28th, 2023, was hosted atcity.
	a Trivandrum
	b Chennai
	c Aurangabad
	d Hyderabad
62	'Suposhit Maa Abhiyan', nutritional support program for pregnant mothers and girls, was launched in
	a Kerala
	b Karnataka
	c Assam
	d Rajasthan
63	The Unique Identification Authority of India is a statutory authority established under the provisions of Aadhaar act 2016 by the Govt. of India under.....
	a Ministry of Electronics and Information Technology
	b Ministry of Defence
	c Ministry of External Affairs
	d Ministry of Science & Technology
64	Jan Aushadhi Train seeks to raise awareness about
	a Create awareness about Jan Aushadhi scheme
	b Provide affordable medical devices
	c Conduct medical camps
	d Provide vaccinations at free of cost
65	'Medium Range Surface-to-Air Missile (MRSAM)' is produced at
	a IOCL
	b GAIL
	c SAIL
	d BDL
66	The capital city of is Pyongyang.
	a South Africa
	b North Korea
	c Singapore
	d Japan

67	'World Braille Day' is observed on	
	a	Jan 1
	b	Jan 4
	c	Jan 7
	d	Jan 10
68	National Data & Analytics Platform (NDAP), was launched by	
	a	State Bank of India
	b	NITI Aayog
	c	HDFC
	d	NASSCOM
69	Which Institute has won the National Intellectual Property Award 2019 in the category "Top Indian R & D Institution/Organisation for Patents & Commercialization"?	
	a	SCTIMST
	b	IIT Roorkee
	c	IIT Guwahati
	d	Arrow Greentech Ltd.
70	New Space India Limited is the commercial arm of	
	a	SCTIMST
	b	ISRO
	c	DRDO
	d	BHEL
71	The oath to the Judge of a high court is administered by	
	a	Prime Minister
	b	President
	c	Governor
	d	Chief Justice of India
72	NITI Aayog organized the fifth edition of the Women Transforming India (WTI) Awards in March 2022. As part of the Azadi ka Amrit Mahotsav, the WTI Awards were conferred on women achievers to celebrate their contribution towards a 'Sashakt Aur Samarth Bharat'.	
	a	25
	b	50
	c	75
	d	100
73	Who has been appointed as coordinator for the G20 summit, which will be hosted by India in 2023	
	a	Ajith Doval
	b	Harsh Vardhan Shringla
	c	S Jaishankar
	d	Amitabh Kant
74	The maximum term of a Panchayat in a state is years	
	a	5
	b	4
	c	3
	d	2
75	According to National Commission for Protection of Child Rights (NCPCR) a child is defined as any person in the age group of?	
	a	0-5
	b	0-10
	c	0-15

	d	0-18
76	The Whistle Blowers Protection Act was enacted in the year	
	a	2015
	b	2014
	c	2013
	d	2012
77	The 5G testbed has been developed as a multi-institute collaborative project by eight institutes led by	
	a	IIT Bombay
	b	IIT Delhi
	c	IIT Madras
	d	IIT Kanpur
78	What is the name of the first Indian space mission to observe the Sun?	
	a	Aditya-L1
	b	Chandrayaan-1
	c	Mangalyaan
	d	Chandrayaan-2
79	1853 is a landmark in India's Transport because of first	
	a	Passenger train
	b	Cargo plane
	c	Submarine
	d	None of the above
80	Which section of the Drugs and Cosmetics Act, 1940 defines the standards of quality for drugs?	
	a	16
	b	20
	c	21
	d	22
81	Choose the option that is most nearly same in meaning of the word "Ubiquitous"	
	a	Unanimous
	b	Omnipresent
	c	Doubt
	d	Anonymous
82	Choose the option that is most nearly same in meaning of the word "Callous"	
	a	Kind
	b	Apathy
	c	Sympathetic
	d	Insensitive
83	Choose the option that is most nearly same in meaning of the word "Genesis"	
	a	End
	b	Abolishment
	c	Origin
	d	Attack
84	What will be the remainder if 3^7 is divided by 8?	
	a	1
	b	2
	c	3
	d	4

85	A quantity $x=240$ is increased by 50%. What is the resultant value?	
	a	120
	b	240
	c	360
	d	480
86	A quantity $x=100$ is first increased by 20% and then the resultant is decreased by 10%. What is the final value?	
	a	108
	b	109
	c	110
	d	111
87	Anoop bought a car for INR 320000 and sold it for INR 240000. What is the loss percentage?	
	a	20
	b	25
	c	30
	d	35
88	Rohan bought 100 glasses for INR 8500. He broke 20 glasses while transporting them. What should be the selling price of each of the remaining glasses in order to have an overall profit of 4%?	
	a	100.5
	b	110.5
	c	120.5
	d	130.5
89	A worker A can finish work in 3 days and B can finish work in 9 days. How long will it take to finish the work if they both worked together?	
	a	9/2 days
	b	9/7 days
	c	9/5 days
	d	9/4 days
90	Pipes A and B can fill a tank in 4 and 8 hours respectively. Pipe C can empty it in 16 hours. If all the three pipes are opened together, then how long will it take to fill the tank?	
	a	4.5 hours
	b	2 hours
	c	6 hours
	d	3.2 hours
91	A man rows upstream 18 km and downstream 30 km taking 3 h each time. What is the velocity of the current?	
	a	2 km/h
	b	3 km/h
	c	4 km/h
	d	5 km/h
92	A car covers first 300 m at a speed of 54 km/h and next 500 m at a speed of 72 km/h. What is the average speed of the car?	
	a	50 km/h
	b	47 km/h
	c	60 km/h
	d	64 km/h

93	How many words can be formed out of the letters of the word "UNITED" taking all the letters at a time considering no letter is to be repeated?	
	a	620
	b	720
	c	820
	d	920
94	How many words can be formed from the letters of the word "APPLE" taking all the letters at a time considering no letter is to be repeated and first and last letter of the words are "P"?	
	a	6
	b	12
	c	24
	d	48
95	A bag contains 6 black and 8 white balls. One ball is drawn at random. What is the probability that the ball drawn is white?	
	a	$\frac{3}{7}$
	b	$\frac{4}{7}$
	c	$\frac{5}{7}$
	d	$\frac{6}{7}$
96	A card is drawn from a pack of 52 cards. What is the probability of getting a queen of club or a king of heart?	
	a	$\frac{1}{26}$
	b	$\frac{2}{26}$
	c	$\frac{3}{26}$
	d	$\frac{4}{26}$
97	Fill in the number that completes the following sequence 3, 5, 7, 11, 13, 17, 19,	
	a	20
	b	21
	c	22
	d	23
98	Fill in the blank most appropriately. A of wolves.	
	a	Bunch
	b	Fleet
	c	Pack
	d	Litter
99	Which of the following words does not have a similar meaning to densely populated?	
	a	Populace
	b	Crowded
	c	Populous
	d	Packed
100	Find the unit digit of $122^{122} \times 133^{133}$	
	a	1
	b	2
	c	3
	d	4



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Program: PhD(Health Sciences) – Fulltime & Part-time

Time:90 Minutes

Max. Marks: 100

(Select the most appropriate answer)

(There are **no negative** marks for wrong answers)

Question No.	Correct Answer
1	D
2	A
3	B
4	C
5	B
6	D
7	C
8	C
9	A
10	B
11	A
12	D
13	D
14	C
15	B X
16	B
17	D
18	A
19	C
20	B
21	C
22	D
23	A
24	C
25	A
26	B
27	D
28	B
29	C
30	D

31	D
32	A
33	A
34	B
35	B
36	C
37	B
38	C
39	C
40	A
41	D
42	B
43	A
44	C
45	D
46	B
47	C
48	D
49	A
50	C
51	C
52	D
53	A
54	B
55	D
56	B
57	C
58	B
59	A
60	B
61	c
62	d

63	a
64	a
65	d
66	b
67	b
68	b
69	a
70	b
71	c
72	c
73	b
74	a
75	d
76	b
77	c
78	a
79	a
80	a
81	b
82	d
83	c
84	c
85	c
86	a
87	b
88	b
89	d
90	d
91	a
92	d
93	b
94	a

D. P. Umachandran
Associate Dean (PhD Affairs)

95	b
96	a
97	d
98	c
99	a
100	b

A handwritten signature in black ink, appearing to be 'B. J. M.', located below the table.