

ST. THOMAS' COLLEGE (AUTONOMOUS), THRISSUR

DEPARTMENT OF MATHEMATICS

SYLLABUS FOR BRIDGE COURSE (2019-2020)

B. Sc. Mathematics (Statistics & Computer Science)

Reasoning & Logical Ability

Verbal reasoning, letter and symbol series, verbal classification, logical reasoning etc.

Communication Skills & Language Aptitude

Module I: Communication – introduction – in animals, including human beings.

Human Communication: purpose (ideas, feelings, data...)

Communication: oral, written and visual.

Module II: Oral: way of speech – formal / informal – formal: formal settings (official)- informal: between/among peers.

Written: all forms of writing letters: business, official, minutes, applications, notifications, certificates etc.

Visual: pictures, graphs, charts, signs, hoardings, posters, maps, photographs etc.

Audio-visual: sound and visuals.

Module III: Non-verbal Communication: 1) Body language (emotions, feelings, eye contact, gestures, posture etc.) (2) Paralanguage: pitch, intonation, stress etc.

Syllabus of Core & Complementary Course:

Mathematics:

Module I: Limit, continuity, differentiation and integration.

Module II: LCM and GCD.

Statistics:

Data, graphical method, measure of central tendency, dispersion, skewness, kurtosis, basic probability

Computer Science:

Computer Basics – hardware, Software, Operating System, Languages and translators. DBMS – DBMS Concepts. Networks - Basic Concepts, Different types, Topologies.

ST. THOMAS' COLLEGE (AUTONOMOUS), THRISSUR

DEPARTMENT OF MATHEMATICS (B BATCH)

Bridge Course Evaluation 2019-2020

No of Questions: 30

Marks: 60

Section I Reasoning & Logical Ability

(7)

- Find the next term of the series 1,5,11,19, ...
(a)32 (b)28 (c)29 (d)33.
- $234 \times 0 \times 11 \times 22 =$
(a)555 (b)0 (c)310 (d)None of these.
- Find the odd one out.
(a)Rabbit (b) Cat (c)Elephant (d)Deer.
- A fruit basket contains more apples than lemons.
There are more lemons in the basket than there are oranges.
The basket contains more apples than oranges.
If the first two statements are true, the third statement is
(a)True (b) False (c) Need not be true (d) None of these
- Choose an answer based on given information:
"When they heard news of the hurricane, Maya and Julian decided to change their vacation plans. Instead of traveling to the island beach resort, they booked a room at a fancy new spa in the mountains. Their plans were a bit more expensive, but they'd heard wonderful things about the spa and they were relieved to find availability on such short notice".
(a)Maya and Julian take beach vacations every year
(b)The spa is overpriced.
(c)It is usually necessary to book at least six months in advance at the spa.
(d)Maya and Julian decided to change their vacation plans because of the hurricane.
- Which word does NOT belong with the others?
(a)Tyre.(b)Steering wheel (c)Engine(d)Car
- Fill the blank in the end of the series.
FAG, GAF, HAI, IAH, ____
(a)JAK.(b)HAL (c)MAN(d)PAQ

Section II

Communication Skills & Language Aptitude

(5)

-is the act of expressing ideas, feelings, and transferring data to others.
a) music b) communication c) pronunciation d) transformation
- Greetings, chats and casual conversations are generally considered communication.
a) informal b) formal c) official d) structural
- The branch of linguistics that comprises the study of the sounds of human speech is.....
a) kinetics b) appendix c) cybernetics d) phonetics
-is the way human body communicates through its physical movements and changes in demeanour.
a) proxemics b) sign language c) body language d) arbitrariness
- The particular feature of human language to refer to past and future time is called
a) displacement b) reflexivity c) creativity d) duality

Section III Questions from Qualifying Course

(10)

13. If $A = \{\emptyset, \{\emptyset\}\}$ then power set of A is
 (a) $\{\emptyset, \{\emptyset\}, A\}$ (b) $\{\emptyset, \{\{\emptyset\}\}, A\}$ (c) $\{\emptyset, \{\emptyset\}, \{\{\emptyset\}\}, A\}$ (d) $\{\emptyset, \{\emptyset\}\}$.
14. If $A = \{1, 2, 3\}$, $B = \{a, b\}$. Then $n(A \times B)$ is
 (a) 5 (b) 3 (c) 2 (d) 6.
15. The domain of the function $f(x) = \frac{1}{\sqrt{4-x^2}}$ is
 (a) $[-2, 2]$ (b) $(-\infty, 2) \cup (2, \infty)$ (c) $(-2, 2)$ (d) $(-\infty, \infty)$.
16. Range of $\cos x$ is
 (a) $[-1, 1]$ (b) $(-1, 1)$ (c) $(-\infty, \infty)$ (d) $(0, \infty)$.
17. $\lim_{x \rightarrow 0} \frac{x^2}{x} =$
 (a) does not exist (b) 0 (c) 1 (d) ∞ .
18. $\lim_{x \rightarrow 0} x \sin x =$
 (a) 1 (b) 0 (c) does not exist (d) 2.
19. The function $f(x) = \frac{x^2+1}{x^2-1}$ is not continuous at
 (a) 0 (b) 1 (c) -1 (d) 1, -1.
20. $\frac{d}{dx}(\sin x^2) =$
 (a) $\sin 2x$ (b) $\cos x^2$ (c) $-\cos x^2$ (d) $2x \cos x^2$.
21. $\frac{d}{dx}(x \sin x) =$
 (a) $x \cos x$ (b) $x \cos x + \sin x$ (c) $-\cos x + x$ (d) $\cos x$.
22. $\int_{-2}^2 x^9 dx =$
 (a) 0 (b) 23 (c) 1 (d) 26.

Section IV Questions from Introductory Topics of UG

(8)

23. $\int x \sin x dx =$
 (a) $x \cos x + \cos x + c$ (b) $\cos x - x \cos x + c$ (c) $\cos x + c$ (d) $\sin x + c$.
24. The number of primes less than 25 =
 (a) 5 (b) 11 (c) 10 (d) 9.
25. Find the gcd of the numbers 23 and 49.
 (a) 5 (b) 3 (c) 1 (d) 6.
26. Find the lcm of 75 and 100
 (a) 750 (b) 300 (c) 150 (d) 600.
27. An assembly language program consists of instructions written in _____
 (a) Binary code instructions (b) Encoded instructions (c) Mnemonic instructions (d) None of these
28. _____ is a set of computer programs that manages the hardware and software resources of a computer
 (a) Compiler (b) Operating system (c) Interpreter (d) Language processor
29. Two ogive curves meet at
 (a) mean (b) median (c) mode (d) variance
30. A data can be use from a past study is known as
 (a) Primary data (b) Qualitative data (c) Secondary data (d) Quantitative data.

Dept. Of Mathematics

Bridge Course Evaluation 2019-20

B. Sc. Mathematics (Statistics & Computer Science)

SI No	Name	Score out of 60
1	AJITH P P	46
2	AKHILA K A	30
3	ANJANA T K	40
4	ANUSHA R	58
5	APARNA K MENON	50
6	ASWINKRISHNAN B	40
7	BENZIYA P BENINU	34
8	DEVIKA K MURALI	44
9	GIJO P J	38
10	JAGAN N V	36
11	LAKSHMY MENON	48
12	LITTANIA ROSE T.B	56
13	NIMEGHA K M	46
14	PARVATHY REMESH	50
15	PRADOSHA K	48
16	PRIYA LAL	46
17	SANDRA THOMAS	48
18	SAVIO JOSE	50
19	SONA DAVIS	46
20	SREEDEVI.P.K	44
21	TEENA SAJI	44
22	VINUJA SAJEEV	42
23	JINU P BABU	32
24	MELVIN GEORGE	32
25	ALVIN BABY	28
26	MERIN DAVIS	32
27	SONAL THERESA MP	42
28	ABEL PT	44
29	YADUKRISHNAN	44

HOD: Vincent Joseph Pulikkottil

Class Teacher: Dr. Sr.Alphonsa Mathew

P. J. Vincent
20/6/19
[Signature]

Dept. Of Mathematics

Bridge Course Evaluation 2019-20

B. Sc. Mathematics (Statistics & Computer Science)

ADVANCED LEARNERS	AVERAGE LEARNERS	SLOW LEARNERS
ANUSHA R	AJITH P P	AKHILA K A
APARNA K MENON	ANJANA T K	BENZIYA P BENINU
JAGAN N V	ASWINKRISHNAN B	JINU P BABU
LAKSHMY MENON	DEVIKA K MURALI	MELVIN GEORGE
LITTANIA ROSE T.B	GIJO P J	ALVIN BABY
PARVATHY REMESH	NIMEGHA K M	MERIN DAVIS
PRADOSHA K	PRIYA LAL	
SANDRA THOMAS	SONA DAVIS	
SAVIO JOSE	SREEDEVI.P.K	
	TEENA SAJI	
	VINUJA SAJEEV	
	SONAL THERESA MP	
	ABEL PT	
	YADUKRISHNAN	

HOD: Vincent Joseph Pulikkottil

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A. J. Vincent
20/6/19
[Signature]