



FACULTY OF COMMERCE & MANAGEMENT STUDIES

University of Kelaniya, Sri Lanka.



Bachelor of Business Management Honours in Financial Engineering

Faculty of Commerce and Management Studies

UNIVERSITY OF KELANIYA

Model Paper

Number of pages: 13

Time: 11.30 a.m. – 02.00 p.m.

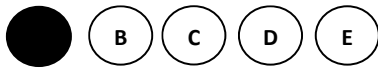
Number of questions: 50

No of pages 07

Instructions to candidates

1. Do NOT open this paper until instructed by the supervisor.
2. This paper consists of three sections with 50 single best answer questions.
Part A: Mathematics (questions 01 to 25)
General Knowledge (questions 26 to 35)
Reading Comprehension (questions 36 to 50)

3. You will be provided with an answer sheet where the answer for each question should be marked as follows.



For each correctly placed answer, two marks are awarded.

For each incorrectly placed answer, no mark is awarded or deducted

If none of the five circles are filled in, no mark is awarded or deducted.

If more than one of the five circles are filled in, no mark is awarded or deducted.

4. Tipex is not Allowed
5. Please mark the correct answer to each of the questions by completely darkening the oval of your choice with a dark pencil in the given answer sheet.

Mathematic Section

- How much the number 0.756 is greater than to $\frac{3}{4}$?
 - $\frac{6}{25}$
 - $\frac{3}{125}$
 - $\frac{3}{250}$
 - $\frac{3}{500}$
 - $\frac{1}{250}$

- If the numbers $\frac{17}{24}$, $\frac{1}{2}$, $\frac{3}{8}$, $\frac{3}{4}$ and $\frac{9}{16}$ were ordered from greatest to least, the middle number of the resulting sequence would be
 - $\frac{17}{24}$
 - $\frac{1}{2}$
 - $\frac{3}{8}$
 - $\frac{3}{4}$
 - $\frac{9}{16}$

- If x is an even integer and y is an odd integer, which of the following **can not** be true?
 - x^y is an even integer.
 - y^x is an odd integer
 - x is a multiple of y .
 - y is a multiple of x .
 - xy is an even integer.

- If n number of red pencils cost 10 cents each and m number of blue pencils cost 9 cents each, what is the average (arithmetic mean) cost, in cents, per pencil?
 - $\frac{19(n+m)}{2}$
 - $\frac{10n+9m}{19}$
 - $\frac{10n+9m}{n+m}$
 - $\frac{n+m}{2}$
 - $\frac{19}{n+m}$

5. A certain test consists of 8 sections with 25 questions numbered from 1 to 25, in each section.
- If a student answered all of the even-numbered questions correctly and $\frac{3}{4}$ of the odd numbered questions correctly, what was the total number of questions he answered correctly?
- (A) 150
(B) 172
(C) 174
(D) 175
(E) 176
6. A certain club has 35 male members and 45 female members. Which of the following equals the ratio of the number of male members to the number of female members?
- (A) 7:16
(B) 5:9
(C) 5:7
(D) 3:4
(E) 7:9
7. What is 37.5 percent of $\frac{2}{3}$?
- (A) $\frac{1}{8}$
(B) $\frac{1}{4}$
(C) $\frac{3}{8}$
(D) $\frac{1}{2}$
(E) $\frac{3}{4}$
8. Last year, if 97 % of the revenues of a company came from domestic sources and the remaining revenues, totaling Rs.450,000, came from foreign sources, then, what was the total of the company's revenues?
- (A) Rs.1,350,000
(B) Rs.1,500,000
(C) Rs.4,500,000
(D) Rs.15,000,000
(E) Rs.150,000,000

9. A store reported total sales of \$385 million for February of this year and the total of sales for the same month in the last year was \$320 million. What was the percentage increase in sales approximately?
- (A) 2%
 - (B) 17%
 - (C) 20%
 - (D) 65%
 - (E) 83%
10. If $x^2 - y^2 = 28$ and $x - y = 4$, then what is the average of x and y ?
- (A) 1.75
 - (B) 3.5
 - (C) 7
 - (D) 8
 - (E) 10
11. For the final step in a calculation, Nimal accidentally divided by 1,000 instead of multiplying by 1,000. What should he do to his incorrect answer to correct it?
- (A) Multiplying by 1,000.
 - (B) Multiply it by 100,000.
 - (C) Multiply it by 1,000,000.
 - (D) Square it.
 - (E) Double it.
12. In a recent survey, 65 % of those responding were in favor of recycling. If 780 people were in favor of recycling, then how many responded to the survey?
- (A) 1287
 - (B) 1200
 - (C) 900
 - (D) 845
 - (E) 507
13. If the average (arithmetic mean) of a , b , and c is 40, then what is the average (arithmetic mean) of $(3a+10)$, $(3b+10)$ and $(3c+10)$?
- (A) 50
 - (B) 70
 - (C) 130
 - (D) 150
 - (E) It cannot be determined from the information given.

14. If $\frac{2}{7}$ of 210 students in a class attended the graduate school, what was the total number of students in the class who did not attend the graduate school?
- (A) 42
 - (B) 60
 - (C) 105
 - (D) 142
 - (E) 150
15. A trip takes 6 hours to complete. After travelling $\frac{1}{4}$ of an hour, $1\frac{3}{8}$ hours and $2\frac{1}{3}$ hours, how much time does one need more to complete the trip ?
- (A) $2\frac{1}{12}$ hours
 - (B) 2 hours , $2\frac{1}{2}$ minutes
 - (C) 2 hours , 5 minutes
 - (D) $2\frac{1}{8}$ hours
 - (E) 2 hours $7\frac{1}{2}$ minutes
16. It takes 30 days to fill a laboratory dish with bacteria. If the size of the bacteria doubles each day, how long did it take for the bacteria to fill one half of the dish?
- (A) 10 days
 - (B) 15 days
 - (C) 24 days
 - (D) 29 days
 - (E) 29.5 days
17. A car wash centre can wash 8 cars in 18 minutes. At this rate, how many cars can the car wash centre wash in 3 hours?
- (A) 13
 - (B) 40.5
 - (C) 80
 - (D) 125
 - (E) 405
18. If the area of a square region having sides of length 6 centimeters is equal to the area of a rectangular region having width 2.5 centimeters, then the length of the rectangle, in centimeters, is
- (A) 8.5
 - (B) 9.5
 - (C) 9.6
 - (D) 10.5
 - (E) 14.4

19. If the ratio of the areas of 2 squares is 2 : 1 then the ratio of the perimeters of the squares is

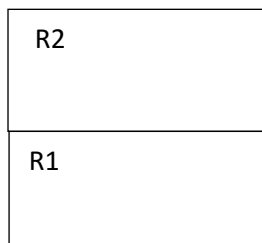
- (A) 1 : 2
- (B) $1 : \sqrt{2}$
- (C) $\sqrt{2} : 1$
- (D) 2 : 1
- (E) 4 : 1

20. City B is 5 miles east of city A. City C is 10 miles southeast of city B. Which of the following is the closest to the distance from city A to city C?

- (A) 11 miles
- (B) 12 miles
- (C) 13 miles
- (D) 14 miles
- (E) 15 miles

21. If two identical rectangles R1 and R2 form a square when placed next to each other and the length of R1 is x times the width of R1. The value of x is

- (A) 1
- (B) $\frac{3}{2}$
- (C) $\frac{5}{4}$
- (D) 2
- (E) 3



22. A manufacturer of jam wants to make a profit of \$ 75 when he sells 300 jars of jam. It costs 65cents each to make the first 100 jars of jam and 55 cents each to make each jar after the first 100. What price should he charge for the 300 jars of jam?

- (A) \$ 75
- (B) \$ 175
- (C) \$ 225
- (D) \$ 240
- (E) \$ 250

23. If $\frac{x}{y} = \frac{3}{z}$ then $9y^2$ equals to

- (A) $\frac{x^2}{9}$
- (B) x^3z
- (C) x^2z^2
- (D) $3x^2$
- (E) $\frac{1}{9}x^2z^2$

Each of the following problems has a question and two statements which are labeled (1) and (2). Use the data given in (1) and (2) together with other available information to decide whether the statements are sufficient to answer the question. Then fill in the space.

- (A) If you get the answer from (1) alone but not from (2) alone
- (B) If you can get the answer from (2) alone but not from (1) alone
- (C) If you can get the answer from both (1) and (2) together but not from (1) alone or (2) alone
- (D) If either statement (1) alone or statement (2) alone suffices
- (E) If you cannot get the answer from statements (1) and (2) together but need even more data

24. How much is Johan's weekly salary ?

- (1) John's weekly salary is twice as much as Fred's weekly salary
- (2) Fred's weekly salary is 40% of the total of Chuck's weekly salary and John's weekly salary

- (A) (B) (C) (D) (E)

25. How much cardboard will it take to make a cubical box with no top?

- (1) The area of the bottom of the box is 4 square feet
- (2) The volume of the box is 8 cubic feet

- (A) (B) (C) (D) (E)

General Knowledge Section

26. Current inflation of the economy can be approximately
- (A) 2-2.8%
 - (B) 3-3.9%
 - (C) 5-5.5%
 - (D) 4-4.5%
 - (E) 6-7.5%
27. SEC stands for
- (A) Social and Economic Conference
 - (B) Security Establishment Code
 - (C) Security Exchange Commission
 - (D) Selective Exchange Control
 - (E) Sri Lanka Economic Committee
28. The Governor of Central bank of Sri Lanka is
- (A) Mr. Ajith Nivard Cabraal
 - (B) Mr. Nalaka Godahewa
 - (C) Dr. Indrajit Coomaraswamy
 - (D) Mr. Sathyajith Ponnambalam
 - (E) Mr. Arjun Mahendran
29. S & P stands for
- (A) Standard and Poor's
 - (B) Society and Poverty
 - (C) Strategic and Powerful
 - (D) Statistic and Proof
 - (E) Secondary and Primary
30. The firm with the highest market Capitalization in Colombo Stock Exchange is
- (A) Dialog Axiata PLC
 - (B) Ceylon Tobacco Company PLC
 - (C) Commercial Bank of Ceylon PLC
 - (D) John Keels Holding PLC
 - (E) Sampath Bank PLC

31. Number of business sectors currently listed in Colombo Stock Exchange is
- (A) 10
 - (B) 20
 - (C) 15
 - (D) 25
 - (E) 8
32. The current Fitch Credit Rating for Sri Lanka is
- (A) BBB
 - (B) AA+
 - (C) B+
 - (D) BB-
 - (E) BB+
33. Central Government debt to GDP in Sri Lanka in 2016 is
- (A) 75.2%
 - (B) 103.4%
 - (C) 79.3%
 - (D) 80.2%
 - (E) 88.3%
34. Contributions to Gross Domestic Production as Agriculture, Industries and Services in 2016 are
- (A) 7.1%, 26.8%, 56.5%
 - (B) 27.2%, 8.3%, 58.4%
 - (C) 57.5 %, 25.8, 8.5%
 - (D) 9.5%, 54.5%, 24.3%
 - (E) 8.5%, 28.6%, 57.8%
35. Gross official reserves (Foreign Reserves) of Sri Lanka as at 2016 is
- (A) 4.1 Months of Imports
 - (B) 3.7 months of Imports
 - (C) 2.5 months of imports
 - (D) 5.2 months of Imports
 - (E) 1.9 months of imports

Reading Comprehension Section

Read the passage below and answer Questions 36-42.

School rules

A Pupils are required to be in their classrooms by 8.30 a.m. each morning for registration. Pupils coming late will be punished accordingly. Pupils may not leave the school grounds during the normal working day without permission. During study periods and recreation students in the sixth form may leave the school grounds provided that parents have given written authorization at the beginning of the year.

B Students must come to school in proper attire. If this basic rule is not observed, the school reserves the right to refuse entry to any student.

C The school strongly disapproves of pupils taking paid employment. It should certainly never interfere with school activities, and will not be accepted as an excuse for missing any school commitment.

D In the case of a pupil being absent from school, please telephone on the first day in all instances. Messages can be left on the answering machine before 7.30 a.m. or you can send an email to the school address to reach us by 8.30 a.m. at the latest.

E Except in the case of illness, students are expected to be present for the entire school year. Routine medical and dental appointments should be arranged so as not to conflict with school commitments, as should family travel.

F The school regards the completion of careful and regular work at home as an indispensable part of the curriculum. Every pupil has a study plan outlining his/her evening obligations day by day and parents are asked to ensure that their child has a suitable place and time in which to do the work prescribed. If a pupil appears to be doing too little work, parents should contact the teacher at once.

G Homework can be excused only after the receipt and approval by the teacher concerned of a letter from a parent setting out the reasons. Social engagements are not acceptable as an excuse. It is essential that pupils endeavour to catch up on any missed work as soon as possible.

H During the holidays the school and its grounds are out-of-bounds for all pupils, unless accompanied by a teacher. Pupils visiting the school's sports hall or any of the school's grounds or taking part in a school visit of any kind, whether in term or in the holidays, are subject to school rules.

I No pupil may drive a car or motorbike within the school grounds without permission from the headmaster. Permission to come by bicycle should be obtained from the teacher. Bikes must be walked onto the school grounds. Cycle helmets must be worn and lights used after dark. Rollerblades, roller skates and skateboards are not permitted within the school grounds at any time.

J Bicycles must not be chained to the school railings. Any bicycles brought onto school grounds should be clearly labeled with the owner's name and must be left locked in the bicycle sheds provided.

K Parents are strongly advised to put name tags on their children's belongings. The school cannot be held responsible for any loss or theft of students' property. Students must keep track of their belongings and not leave them lying around unattended.

Questions 36-42

The reading passage has eleven rules labeled **A-K**. Which rule contains the following information?

Select the correct letter A-K given in the Questions **36-42** below.

NB You may use any letter more than once.

36. Information about what to do if your child cannot attend school

- (A) A
- (B) K
- (C) J
- (D) C
- (E) D

37. The person to contact about how much homework your child should be doing

- (A) A
- (B) J
- (C) F
- (D) C
- (E) K

38. Advice about how students can keep their bicycles secure

- (A) I
- (B) J
- (C) G
- (D) K
- (E) F

39. The school's opinion about schoolchildren working to earn money

- (A) J
- (B) D
- (C) C
- (D) B
- (E) K

40. Details of what parents should do if their child cannot complete their homework

- (A) K
- (B) B
- (C) G
- (D) J
- (E) I

41. Rules about visiting the school property outside of school time

- (A) J
- (B) D
- (C) B
- (D) K
- (E) H

42. Advice about how parents should protect their children's belongings.

- (A) D
- (B) K
- (C) J
- (D) F
- (E) E

Read the passage below and answer Questions **43-50**.

School of independent Study

The University's Independent Study online and correspondence courses offer you the flexibility to reach your educational goals without giving up your life. The study materials you use in your course have been developed by the university faculty so the material you cover is the same as in the courses offered on campus. The only difference is that you can study and take tests when it's convenient for you.

Tuition and fees

The Independent Study tuition fee is \$115 per course. Students may take as many courses as they want. There is a shipping and handling fee of \$30 for each course. All Independent Study students must purchase a Study Guide at a cost of \$30. The university also charges a connectivity fee of \$12 per course. Students enrolling for the first time will be charged a \$9 per course Academic Excellence fee; for returning students this fee is just \$3 per course. A \$15 Academic Records fee is charged once each term, regardless of the number of courses taken. This fee entitles a student to free replacement copies of end-of-course documentation for life. Tuition and fees for out-of-state students are the same as those of local residents.

Time limits

A course can be finished in a minimum of two weeks per module and must be finished in a maximum of four weeks. For example, if your course has three modules you must remain in it for a minimum of six weeks and a maximum of twelve weeks. If you need to meet a deadline, you should take these minimum and maximum periods into account. These periods are calculated from the date you receive your first lesson from the Independent Study office. Modules cannot always be completed in the minimum amount of time. You need to make sure that you know whether your instructors are on vacation at any stage during your enrolment, as this could affect the return of assignments, exams and final grades. Your enrolment is valid for nine months, which begins on the day we post your enrolment application.

NB. Look at the following statements to select the most suitable answer for Questions **43-50**.

TRUE if the statement agrees with the information

FALSE if the statement contradicts the information

NOT GIVEN if there is no information on this

43. The course content offered through the School of Independent Study is different to the other courses the university offers.
- (A) TRUE
 - (B) FALSE
 - (C) NOT GIVEN
44. Students will receive all course materials by post.
- (A) TRUE
 - (B) FALSE
 - (C) NOT GIVEN
45. The Study Guide is optional for Independent Study students.
- (A) TRUE
 - (B) FALSE
 - (C) NOT GIVEN
46. Students will need to pay for extra copies if they lose their final certificate.
- (A) TRUE
 - (B) FALSE
 - (C) NOT GIVEN
47. Students are able to complete each module in less than two weeks.
- (A) TRUE
 - (B) FALSE
 - (C) NOT GIVEN
48. Students may take four weeks to complete a module if necessary.
- (A) TRUE
 - (B) FALSE
 - (C) NOT GIVEN
49. Some modules take longer than two weeks to complete.
- (A) TRUE
 - (B) FALSE
 - (C) NOT GIVEN
50. Academic records fee is charged based on the number of courses taken
- (A) TRUE
 - (B) FALSE
 - (C) NOT GIVEN