

**KINGDOM OF BAHRAIN  
MINISTRY OF EDUCATION**

**DIRECTORATE OF EXAMINATIONS / CENTRAL EXAMINATION SECTION**  
SECONDARY EDUCATION

**MODEL ANSWERS**

**FIRST SEMESER EXAM 2022/2023**

**COURSE NAME:** Financial Mathematics – 1  
**COURSE CODE :** 111 مال

**TRACK:** توحيد مسارات  
**TIME :** 2 Hours

**QUESTION ONE:**

1- Write the number in **letters** or **numbers for** the following:

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NO	<u>Numbers</u>	Number in <u>letters</u>
a	98	Ninety- eight //
b	5000,000	Five-million //
c	0.015	Fifteen Thousandths //
d	612.527 //	Six hundred twelve and Five hundred twenty-seven thousandths.
e	BD 15.325 //	Fifteen dinar and three hundred twenty -five fils

2- Find the place value of the number 2,340,285,389.92 :

Billions			Millions			Thousands			Units			Decimal System		
Hundred Billion	Ten Billion	Billion	Hundred Million	Hundred Billion	Ten Billion	Billion	Hundred Million	Hundred Billion	Ten Billion	Billion	Hundred Million	Decimal Point	Tenths	Hundredths
0	0	2 <sup>¼</sup>	3 <sup>¼</sup>	4 <sup>¼</sup>	0 <sup>¼</sup>	2 <sup>¼</sup>	8 <sup>¼</sup>	5 <sup>¼</sup>	3 <sup>¼</sup>	8 <sup>¼</sup>	9 <sup>¼</sup>	.	9 <sup>¼</sup>	2 <sup>¼</sup>

3- Round the following numbers:

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- a- Round 4667 to the nearest thousand. ...5000 //.....
- b- Round 20.3208 to the nearest hundredths. ...20.321 //.....
- c- BD 11,437.11034 to the nearest fils. ....11437.110 //.....

**QUESTION TWO:**

20 x ½

10

Use the currency exchange table below to convert the following currencies:

Foreign Currency		Selling BHD	Buying BHD
USA Dollar	USD	0.378000	0.375000
Euro	EUR	0.449100	0.446600
Saudi Arabian Riyal	SAR	0.100650	0.100000
Emirati Dirham	AED	0.103900	0.101400
Egyptian Pound	EGP	0.024041	0.022052
Jordanian Dinar	JOD	0.541800	0.531800

a- You have BHD 1000 Bahraini Dinars and would like to convert it to EUR Euro.

$$= 1000 // \div // 0.4491 // = \text{€ } 2226.68 // \quad \text{or}$$

BHD      USD

$$0.4491 // \quad 1$$

$$1000 // \quad ??$$

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b- After you return from travel, you have USD 2500 USA Dollar and you want to get the Bahraini dinar.

$$= 2500 // \times // 0.375 // = \text{BHD } 937.500 // \quad \text{or}$$

BHD      JOD

$$0.375 // \quad 1$$

$$2500 // \quad ??$$

**QUESTION THREE:**

26 x ½

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- a- An employee is engaged for 48 hours during the week at a basic rate of BD 5.000 per hour.

Calculate the gross wage received during the period.

DAYS	SAT	SUN	MON	TUE	WED	THU
Hours	8	8	8	8	8	8
O.T during the day	0	0	2	0	1	0
O.T during the night	0	3	0	0	0	0

- Regular Wage =  $(8/ + 8/ + 8/ + 8/ + 8/ + 8/ ) \times 5/ = \text{BHD}240 .000/$
- Over Time of during the day =  $(2/ + 1/ ) \times 5/ \times 1.25/ = \text{BHD } 18.750/$
- Over Time of during the night =  $3/ \times 5/ \times 1.50/ = \text{BHD } 22.500/$
- Total Wages =  $240.000 \underline{+} 18.750 \underline{+} 22.500 = \text{BHD } 281.250/$



- b- Fill in the missing value it the following table:

No	Employee	No Produced	Rate Per Piecd	Total Pay
1	Sami	500	BD...2.400//.....	BD 1200
2	Ahmed	.....1000//.....	BD 0.650	BD 650
3	Ziad	1500	BD 1.250	BD 1875....//

**QUESTION FOUR:**

A- Complete the following invoice, showing the steps of the solution below:

30 x 1/2

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Qty	Item	Unit Price (BHD)	Total (BHD)
1	Photo-copier	1500.000	1500
1	Office table	300.000	.....300//...
Subtotal			(a) ..1800./.
Trade Discount 5 %			(b) ... (90)/
Net Price			(c) ... 1710/
Vat 10%			(d) .... 171 /
Payment amount			(e) ....1881/

(a) = 1500/ + 300/ = BD1800 /.....

(b) .....= 1800/ x 5%/ = BD 90/.....

(c) : .....1800/ - 90/ = BD 1710/.....

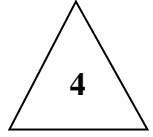
(d): ...1710/x 10%/ = BD 171 /.....

(e) : ..... 1710/+ 171/ = BD 1881/ .....

**B-** A casting reel regularly priced at BHD 36 is on sale for BHD 31.500.  
What is the percentage of Mark- down?

$$\text{Mark down} = 36 / - / 31.500 / = \text{BHD } 4.500 /$$

$$\text{Percentage of Mark- down} = 4.500 / \div / 36 / \times 100 = 12.5\% /$$



**QUESTION FIVE:**

22x 1/2

11

Find the unknown factors of the following, showing the steps of solution below:

NO	Principal	Interest Rate	Time / Period	Simple Interest	Amount
<b>a</b>	BD 2000	5%	135 days	BD ???	BD ???
<b>b</b>	BD 3200	8½%	??? years	BD ???	BD 4832

**a-** .....  $SI = 2000 // \times 5\% / \times 135 / \div 360 / = \text{BD } 37.500 //$

.....  $A = 2000 / + / 37.500 / = \text{BD } 2037.500 /$

**b-** .....  $Si = 4832 // - / 3200 / = \text{BD } 1632 /$

**c-** .....  $T = 1632 / \div / ( 8\frac{1}{2}\% / \times 3200 / ) = 6 \text{ years} //$

الإمام حسن العسلي

END OF ANSWER