

INDEX NUMBER: _____
YEAR: 12 _____

BA PROVINCIAL FREE BIRD INSTITUTE

ANNUAL EXAMINATION 2020

YEAR 12 PHYSICS

ANSWER BOOKLET

HAND IN THIS ANSWER BOOKLET TO THE SUPERVISOR BEFORE YOU LEAVE THE EXAMINATION ROOM
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Mark Gained:	100
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1	A	B	C	D
2	A	B	C	D
3	A	B	C	D
4	A	B	C	D
5	A	B	C	D
6	A	B	C	D
7	A	B	C	D

8) perimeter

(2 marks)

9) (i) change in velocity

(1 mark)

9) (ii) acceleration

(1 mark)

10) (i) relationship	(1 mark)
10) (ii) electric field, E	(1 mark)
11) (i) time	(1 mark)
11) (ii) distance	(1 mark)
11) (iii) angle	(1 mark)
12) (i) acceleration	(1½ marks)
12) (ii) tension	(1 mark)

13) (i) acceleration

(1 mark)

13) (ii) force

(1 mark)

14) (i) acceleration

(1 mark)

14) (ii) time

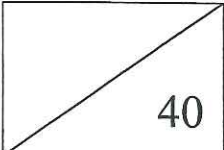
(1 mark)

15) F_A and F_B

(3 marks)

16) (i) condition	(1 mark)
16) (ii) velocity, v_B	(2 marks)
17) (i) time	(1 mark)
17) (ii) horizontal distance	(1 mark)
18) (i) vertical velocity	(1 mark)
18) (ii) horizontal velocity	(1 mark)
18) (iii) time	(1 mark)

18) (iv) maximum height	(1 mark)
18) (v) range	(1 mark)
19) (i) direction	(½ mark)
19) (ii) frequency	(1 mark)
19) (iii) velocity	(1 mark)
20) Gravitational force	(2 marks)

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STRAND 2

ENERGY

[10 marks]

1	A	B	C	D
2	A	B	C	D

3) volume

(2 marks)

4) specific heat capacity

(2 marks)

5) (i) total energy at A

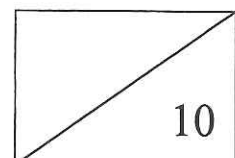
(2 marks)

5) (ii) velocity at B

(1 mark)

6) one assumption

(1 mark)



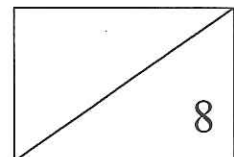
STRAND 3

FLUIDS

[8 marks]

1	A	B	C	D
2	A	B	C	D

3) total pressure	(2 marks)
4) (i) kinematic viscosity	(1 mark)
4) (ii) unit	(1 mark)
5) explanation	(2 marks)



STRAND 4

GEOMETRICAL OPTICS AND WAVE MOTION

[10 marks]

1	A	B	C	D
2	A	B	C	D

3) (i) wavelength	(1 mark)
3) (ii) frequency	(1 mark)
3) (iii) velocity	(1 mark)
4) wavelength	(2 marks)
5) refractive index	(1 mark)
6) (i) one weakness	(1 mark)
6) (ii) dual nature of light	(1 mark)

