S2 Music Practice Paper 1 | Pitch, note values, tempo, scales, chords, orchestra

Junior Secondary Music

S2 Music practice paper: pitch and frequency, note values, tempo, scales, intervals, chords and concert planning. 100 marks with full answers.

1. Pitch and frequency (16 marks)

Show working in parts (a) to (d).

#	Question
1	(a) The standard note A4 has frequency 440 Hz. Find the frequency of A5 one octave above.
2	(b) A perfect fifth has a frequency ratio of 3:2. Find the frequency of E5, a perfect fifth above A4.
3	(c) A note has frequency 264 Hz. Find the frequency one octave below.
4	(d) An instrument spans three octaves. Find the ratio of its highest to lowest frequency.

2. Note values and time signatures (18 marks)

Parts (a) to (c) are short answers; show working in (d).

#	Question
5	(a) In 4/4 time, how many sixteenth notes fill one bar?
6	(b) A minim, two quavers and four semiquavers together make how many beats? Do they fill one 4/4 bar?
7	(c) In 3/4 time, what is the greatest number of quavers in one bar?
8	(d) In 6/8 time the dotted crotchet is one beat. How many beats are in a bar? How many beats in 24 bars?

3. Tempo and performance time (16 marks)

Tempo is given in BPM (beats per minute); show working throughout.

#	Question
9	(a) The tempo is BPM 120. Find the duration of one beat in seconds.
10	(b) In 4/4 at BPM 120, how many seconds do 30 bars take?
11	(c) In 4/4 at BPM 90, how many seconds do 36 bars take?
12	(d) The same music is played at BPM 120 instead of BPM 90. By what percentage does the playing time fall?

4. Scales and intervals (18 marks)

Parts (a) to (c) are short answers; add up the steps in (d).

#	Question
13	(a) A major scale follows the pattern tone-tone-semitone-tone-tone-tone-semitone. How many semitones are in one octave?
14	(b) How many semitones are there in a perfect fifth and in a major third?
15	(c) The tonic triad of C major is built from C with a major third and a perfect fifth above it. Name the three notes.
16	(d) In the melody C-E-G-C, what is the total number of semitones between successive notes?

5. Chords and harmony (16 marks)

A major triad has frequency ratio 4:5:6; show working throughout.

#	Question
17	(a) A major triad has root 264 Hz. Find the frequencies of the third and the fifth.
18	(b) In a major triad, how many semitones lie between root and third, and between third and fifth?
19	(c) A minor triad has 3 semitones between root and third. What is the third of the C minor triad?
20	(d) A major triad has fifth 396 Hz, and the fifth is to the root as 6:4. Find the root frequency.

6. Instruments, orchestra and concert planning (16 marks)

Parts (a) to (d) are applied questions; show working.

#	Question
21	(a) A flute spans C4 to C7, three octaves. Find the ratio of its highest to lowest frequency.
22	(b) A concert lasts 90 minutes with a 15-minute interval and 10 pieces. Find the average playing time per piece.
23	(c) An orchestra has 48 strings, 12 woodwind, 10 brass and 5 percussion players. Find the total and the percentage of strings.
24	(d) A hall has 1,200 seats, 85% are sold, and the average ticket price is 180 dollars. Find the total ticket revenue.