

2020 MIT Science Olympiad Invitational Tournament

Sounds of Music: Aural **KEY**

January 25th, 2020



Exploring the World of Science

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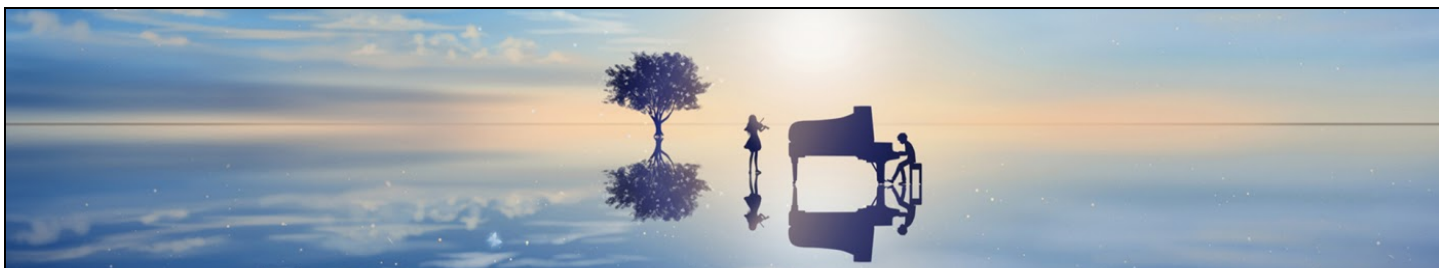
Competitor Names: ANSWER KEY

School Name: _____ Team #: _____

DO NOT OPEN THIS EXAM UNTIL INSTRUCTED!

EXAM INFORMATION:

- You will be given **7 minutes** to complete this exam.
- You may use a three-ring binder and two standalone calculators of any type.
- Once the testing period begins, verify that you have **3 numbered pages** and that your team number is correctly written in the top-left corner on every page. If you are missing a page, let us know immediately.
- Further instructions will be provided in the audio recording.
- Your score on this exam will count for up to 9 points toward your final score and will be scaled using the following formula: (Aural Exam score / Highest Aural Exam score across all teams) x 9.



AURAL EXAM SCORE:

30

/ 30 points



1) Shown below is a written piano transcription of Passage #1, which will be played aloud **one time**. Use the transcription and audio for Passage #1 to answer the following questions. (10 points)

(a) From the transcription, write the solfege names for all eight notes in the first measure of the right hand in order, assuming that *do* represents C. [2pts]

do la sol re ti sol mi do

(b) From the transcription, identify both the **highest** and **lowest** pitches in this passage by letter and octave number (e.g. C4). [2pts]

A6 and E2

(c) In the transcription, what are the small notes at the beginning of the fourth measure called? [1pt]

grace notes

(d) In the transcription, what are the parenthesized accidentals in the last two measures called? Include both an adjective and the specific type of accidental. [2pts]

courtesy naturals (or cautionary/reminder naturals)

(e) Based on the passage played aloud, which of the following terms or expressions characterize Passage #1? [3pts]

Circle ALL that apply.

A. forte

D. moderato

G. legato

B. piano

E. presto

H. pizzicato

C. vivace

F. rubato

I. con pedale

2) Passage #2 will be played aloud **two times**. Listen to Passage #2 and answer the following questions. **(10 points)**

(a) What time signature is this passage in? [2pts]

**7
4**

(b) Which Greek mode is this passage in? [2pts]

Phrygian

(c) The rhythmic string ostinato at the beginning consists of two voices that are separated by what interval? Include both the quality and the quantity of the interval. [1pt]

perfect fifth

(d) Partway through the passage, the music modulates to which scale degree? [1pt]

4 (subdominant)

(e) If the passage lasts 32.0 seconds, calculate the tempo (in beats per minute) to the nearest whole number. [2pts]

$(70 \text{ beats}/32.0 \text{ s}) * (60 \text{ s}/\text{min}) = 131 \text{ bpm}$

(f) Which of the following musical directions best characterizes this passage? Circle one answer. [1pt]

A. Pesante

B. Risoluto

C. Cantabile

D. Scherzando

(g) Which of the following terms best describes the relationship between the two alternating voices that carry the melody in this passage? Circle one answer. [1pt]

A. Imitation

B. Call-and-response

C. Parallel motion

D. Similar motion

3) Passage #3 will be played aloud **three times**. Passage #3 has a fast tempo and consists of four measures of an opening riff and eight measures of the main melody, for a total of twelve measures. Listen to Passage #3 and answer the following questions. **(10 points)**

(a) The instrument that plays in **measures 1 to 4** could be considered a member of which **two** main categories in the Hornbostel–Sachs classification? [2pts]

chordophones and electrophones

(b) On the following staff, transcribe the **rhythm** of the main melody in **measures 5 to 8** (when the main melody first enters), assuming no rests between notes. Even though a key signature has been provided, you may place the noteheads anywhere; **only the rhythm will be scored**. [4pts]



(c) Given the key signature above and the passage played aloud, what key is Passage #3 in? [1pt]

B minor

(d) In **measures 5 to 12** (when the main melody plays), write the letter name of the note played by the **bass** in each measure, based on the key of the passage. If the bass switches to a different note partway through the measure, include **both** notes in order. (Do not include the octave number; writing “A,” “B,” “C,” etc. is enough.) [3pts]

	Measures 5 & 9	Measures 6 & 10	Measures 7 & 11	Measures 8 & 12
Bass note(s) played:	B	F#	G	A, A#